

## *Soldiers On Point for the Nation*



*Persuasive in Peace, Invincible in War*

### *Army Transformation Panel Institute for Land Warfare*

10/17/2000 – Transformation Panel



#### **Talking Point to Cover Slide**

- This briefing was presented to the AUSA Transformation Panel on October 17, 2000. The Panel was co-chaired by the Under Secretary of the Army and the Vice Chief of Staff of the Army. The Panel consisted of:
  - Honorable Greg Dahlberg, the Under Secretary of the Army
  - General Jack Keane, the Vice Chief of Staff of the Army
  - LTG Paul Kern, Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology
  - Major General Jim Grazioplene, Deputy Chief of Staff for Combat Developments, TRADOC
  - MG Bill Bond, Assistant Deputy Chief of Staff for Operations and Plans, Force Development
  - BG Ross Thompson, Deputy Director of Program, Analysis, and Evaluation, Office of the Chief of Staff, Army
  - LTC Nicholson, Commander, 1<sup>st</sup> Battalion, 23<sup>rd</sup> Infantry, 2<sup>nd</sup> Infantry Division
  - SFC Shipley, Platoon Sergeant, B Company, 1<sup>st</sup> Battalion, 23<sup>rd</sup> Infantry, 2<sup>nd</sup> Infantry Division
- One year ago, the Secretary of the Army and the Chief of Staff unveiled the Army Vision. The vision encompassed Readiness, People, and Transformation.

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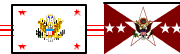
**Our Nation is at peace. Our economy is prosperous. We have strategic perspective and technological potential. This window of historic opportunity will grow narrower with each passing day. We can transform today in a time of peace and prosperity. Or we can try to change tomorrow on the eve of the next war, when the window has closed, our perspective has narrowed, and our potential limited by the press of time and the constraints of resources.**

**General Eric K. Shinseki  
2000-01 AUSA Greenbook**

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### **Talking Points to CSA Quote**

- I hope you had a chance to read the quote from General Shinseki in the Green book article – powerful words that explain why Transformation and Why Now!
- The purpose of today's panel is to inform you about what The Army has done over the past year in order to begin the Transformation component of The Army Vision. We will focus on the "How" of Army Transformation.
- The 80s were years of significant change in Army modernization – Abrams Tank, Bradley Fighting Vehicle, Apache, Blackhawk, and Patriot (The Big 5) all came into the force during that time primarily to provide combat overmatch against the threat.
- Our 80s modernized force is NOW approaching 20 years old and we have worked hard to address the significant challenge to maintain our aging fleets. But this force will be needed for another 20-30 years to meet the NMS. We can no longer afford to tinker at the margins. We have made the significant investment to replace these systems as soon as possible by accelerating our S&T effort for the Objective Force.
- Similarly, we need to make the investment in recapitalizing those systems we need to span the 20 – 30 years needed to complete Transformation.
- We've made the downpayment on Transformation in this past year with the help of OSD and Congress. We solicit your help in sustaining the level of energy that has been put into the Transformation effort and in increasing the level of funding in the future.

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# Agenda

Subject	Panel Member
Introduction	Honorable Dahlberg
Operational Environment	GEN Keane
Legacy Force (Recapitalization)	BG Thompson
Modernization	MG Bond
Objective Force (S&T)	LTG Kern
Interim Force	MG Grazioplene
Conclusion	BG Thompson
Q&A	All

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## Talking Points to Agenda

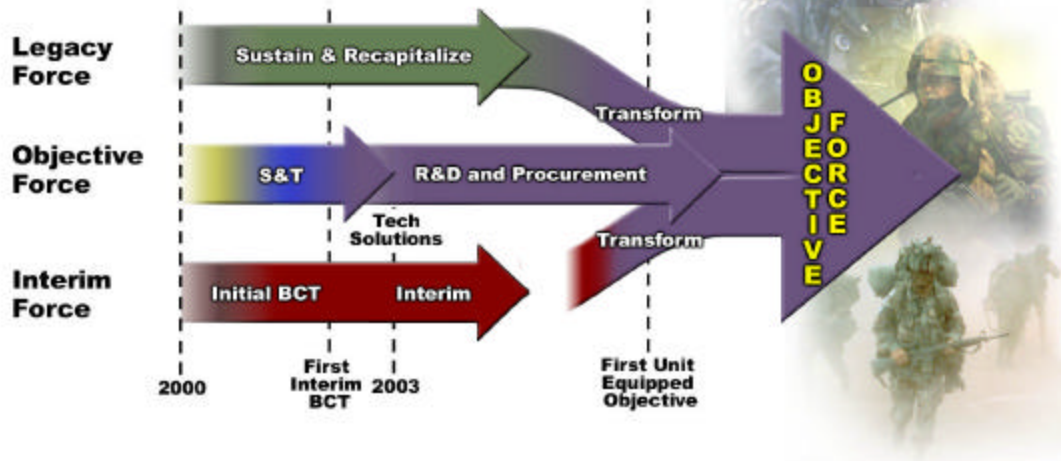
- This Transformation Campaign Plan charts our course to transform The Army into the Objective Force, while maintaining our non-negotiable contract to fight and win our Nation's wars--being trained and ready at all times as we execute operational requirements in support of the National Military Strategy and CINC requirements.
- The Army IS shedding its Cold War structure and equipment!!
- We will ensure the current force continues to remain ready while we aggressively pursue the follow-on generation of technology to accelerate Army Transformation. We are calling this follow-on generation of equipment, with the doctrinal, organizational, training, leader development, and soldier initiatives that accompany it, the Objective Force.
- It is important to remember that it will be at least 2010 before we have procured enough of the Objective Force to begin fighting it as a unit (1<sup>st</sup> OBCT) and it will not be until 2032 before we have transformed the entire Army to this Objective Force. These are our current planning assumptions and I will discuss this in more detail with you later.
- This is the essence of what Army Transformation is all about. -- The plan that will change the Army from its Cold War configuration -- to the Objective Force -- by 2032.

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# The Army Transformation



*... Responsive, Deployable, Agile, Versatile,  
Lethal, Survivable, Sustainable.*

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## Talking Points to the Army Transformation

- This Transformation Campaign Plan charts our course to transform The Army into the Objective Force while maintaining our non-negotiable contract to fight and win our Nation's wars--being trained and ready at all times as we execute operational requirements in support of National Military Strategy and CINC requirements.
- **LEGACY FORCE:** To guarantee near-term warfighting readiness... selected heavy force formations -- AC and RC -- key combat and aviation systems, insert digital technologies... and enhance the lethality and survivability of our Light Forces. Must enhance our current capabilities by recapitalizing the right equipment to ensure our force is ready until transformed to the Objective Force.
- **OBJECTIVE FORCE:** We are increasing our investment in science and technology to accelerate Army Transformation--Future Combat Systems (FCS) specifically. We are focusing effort to support a FY03 Technology Readiness Decision to build prototype system demonstrators in FY04-05. When the technology is mature, and production lines are ready, we will field the Objective Force in unit sets--at least brigade size. Organizations will be complete suites of new integrated combat systems achieving the capabilities outlined in The Army Vision--responsive, deployable, agile, versatile, lethal, survivable, sustainable.
- **INTERIM FORCE:** Operational requirement...have had shortfall for 10 years...we have funded six IBCTs, including one RC brigade. Off the shelf equipped with a yet-to-be-selected Interim Armored Vehicle (IAV). The Interim Force is not an experimental force to be tested for development. We know the requirement. We need operational and warfighting capability now. As quickly as possible, we will make the brigade combat teams ready to respond to immediate operational requirements, thus providing the National Command Authority enhanced strategic options.

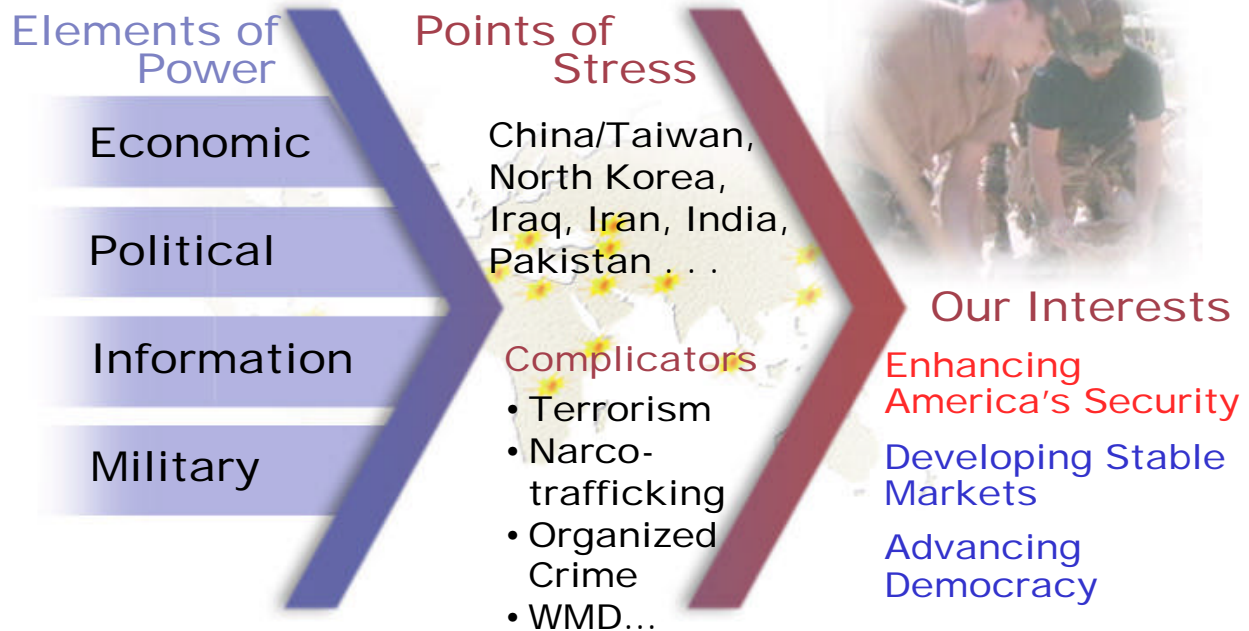
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# The Strategic Environment



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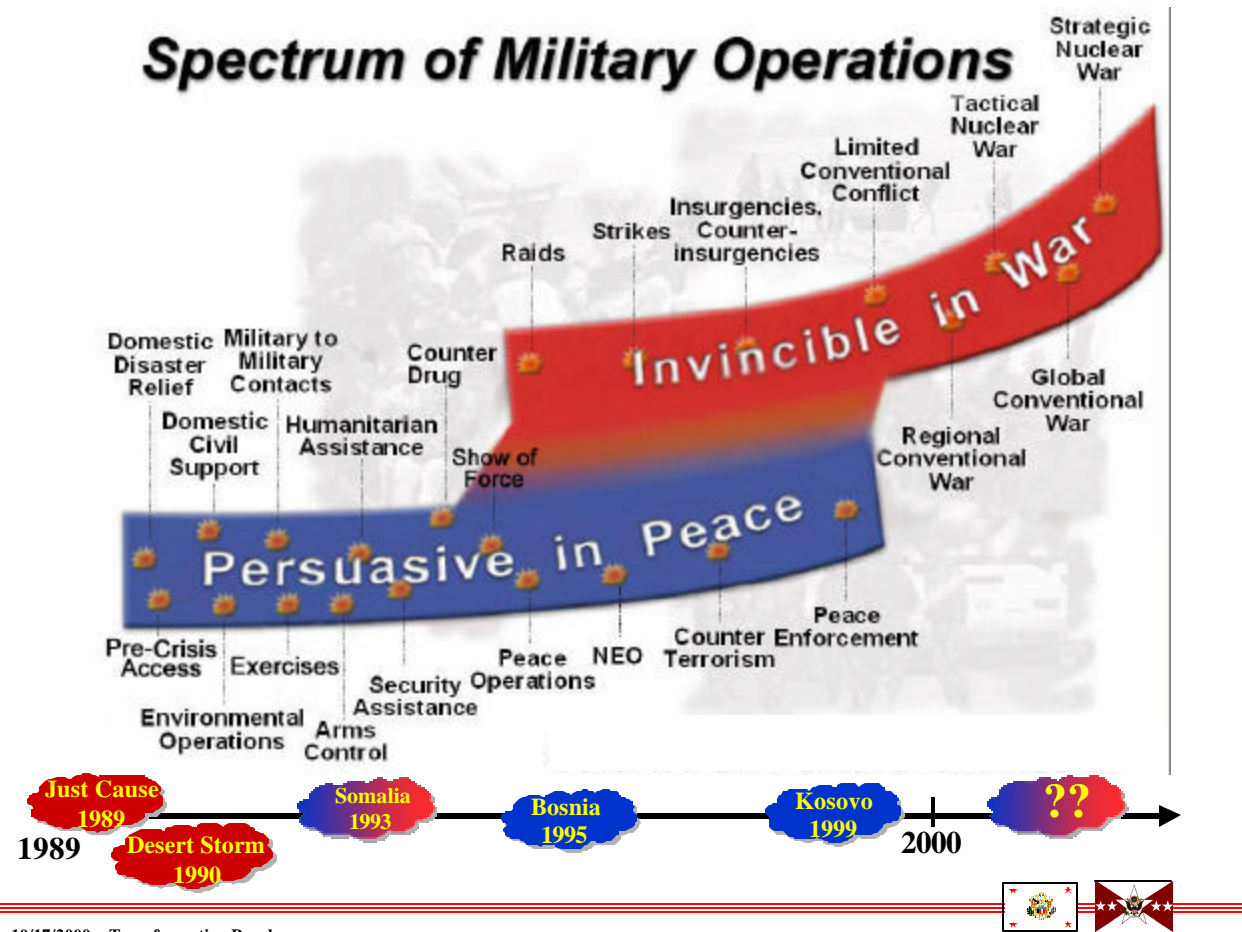
## Talking Points to the Strategic Environment

- Our Nation exercises four elements of power to affect international affairs: economic, political, information, and military power. We effectively wield strength and influence throughout the world through each of these elements.
- There are several points of stress around the globe where our Nation can be tested. North Korea and Iraq remain in our focus as potential trouble spots. Iran has long been a source of instability. Tensions between India and Pakistan and between China and Taiwan threaten the peace in Asia. These points of stress threaten the sovereignty of neighboring states and the stability of their regions. While it has become axiomatic to say that the world is less stable than it was during the Cold War—it is also true.
- The National Security Strategy (NSS) describes three strategic objectives: enhance America's security, bolster America's economic prosperity, and promote democracy and human rights abroad. Terrorism in its various forms, narco-trafficking and organized crime, and the proliferation of weapons of mass destruction are just a few of the transnational complicators that make the strategic environment more dangerous than we would like. This less stable world complicates our attempts to achieve our objectives through entirely peaceful means. Military power—the Nation's fourth element of power—increases our ability to achieve our strategic objectives through the availability of rapidly deployable and overwhelming power. America remains the most potent military power in the world, and The Army provides the land component of that power.
- As The Army prepares to advance American interests against this range of potential threats, it is mindful of the broad spectrum of potential military operations. The spectrum extends from disaster relief and humanitarian assistance on one end to global war on the other. For the past half-century, we have structured The Army for operations on the high end of the spectrum, those operations traditionally characterized as warfighting. But as the experience of the past decade has shown, lower spectrum operations have become far more prevalent. And yet, our non-negotiable contract with the American people is to fight and win the Nation's wars. We must remain organized, trained, and equipped for war, even as we execute other operations to further the National Security.

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## Talking Points to the Spectrum of Military Operations

- Shaping and responding militarily covers a broad spectrum of military operations. Today's Army is a bifurcated force. Our heavy divisions, are well equipped for war but difficult to deploy strategically. Our light forces are well suited for military operations other than war and can respond rapidly, but lack the lethality, survivability, and staying power of the heavy forces once they get there.
- The inherent problem our experience tells us, as shown by the shaded areas, is that peacetime military engagement can turn to warfighting with little notice.
- Our Army must be able to bridge the gap in the spectrum of military operations-- transition from peacetime military engagement to warfighting and back again with no loss of momentum.
- Taken together, the demands of the complex and uncertain strategic environment and the realities of the Army's current condition necessitate profound change.

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*Recapitalization of the Legacy Force*

*BG Ross Thompson*

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*Talking Points to Introduction*

**None**

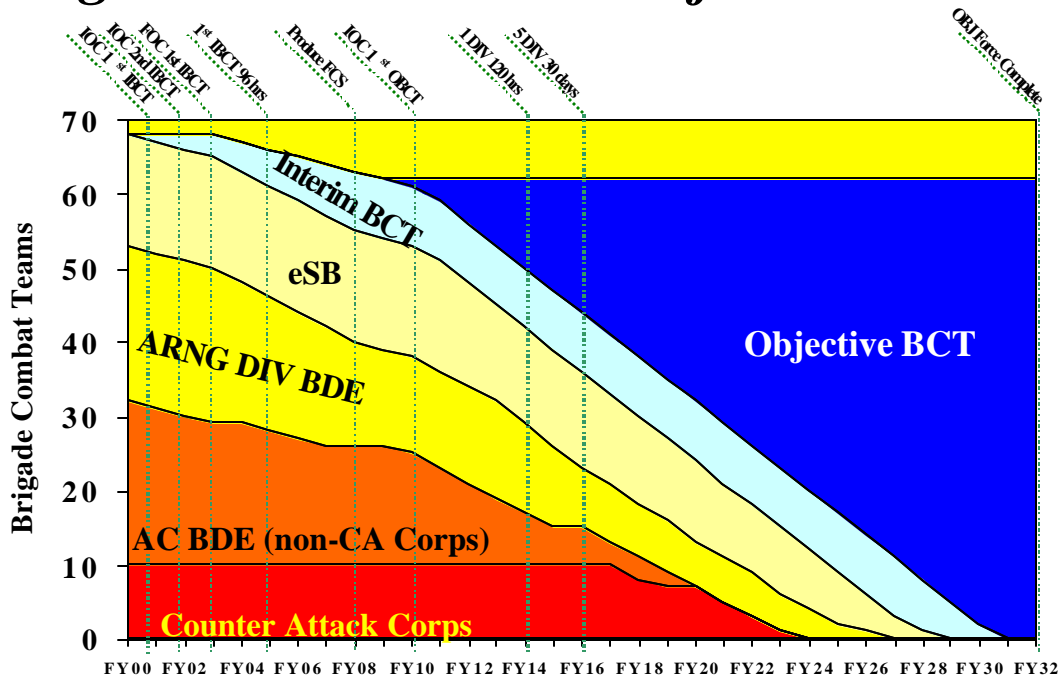
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10/17/2000 Transformation Legacy Force (Recapitalization)



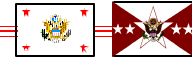
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# Brigade Conversion to Objective Force



**Transforms The Army while maintaining essential Legacy Warfighting readiness to execute the National Military Strategy.**

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## Talking Points to The Transformation Timeline

- The Army currently has 68 combat brigades. This number will drop to 62 with the redesign of six National Guard Combat Brigades to Combat Service Support units.
- The Counter Attack Corps will consist of three heavy divisions and one Armored Cavalry Regiment. This force is needed to support the two major theater of war (MTW) strategy of the National Military Strategy (NMS), as demonstrated through campaign modeling done by The Army. III Corps only has two heavy divisions assigned to it. 3ID would be the third heavy division. This fully modernized and digitized legacy force corps provides the Nation a heavy force capable of decisive victory in either MTW through the anticipated period of Army Transformation.
- Based upon current planning assumptions, from the time we begin conversion to OBCTs in FY 08 - 10
  - Non-Counterattack Corps BCTs will transition in 10 years
  - Counterattack Corps BCTs will transition in 15 years
  - ARNG BCTs will transition in 21 years
  - IBCTs will transition in 30 years
- Brigade fielding timelines –
  - FY10 – FY31 (Objective BCT (OBCT)): 1 OBCT FY10, 2 OBCTs FY11, 3 OBCTs FY12-30, 2 OBCTs FY31
  - Beginning in FY 12, one of the three brigades converted each year will be from the Reserve Component

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# *Definitions*

## *Modernization*

- The development and/or procurement of new systems with *improved warfighting capabilities*

## *Recapitalization*

- The rebuild and selected upgrade of currently fielded systems *to ensure operational readiness and a zero time/zero mile system*
  - Rebuild - Restores system to a like-new condition in appearance, performance, and life expectancy; inserts new technology to improve reliability and maintainability
  - Selected Upgrade - Rebuild of system and adds warfighting capability improvements to address capability shortcomings.

## *Maintain*

- Repair or replacement of *end items, parts, assemblies, and subassemblies that wear or break*

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## *Talking Points to Definitions*

### Investment strategy articulated by SEC DEF Perry in 1995

“Department’s investment focus must transition to a broad modernization and recapitalization effort. The objective of this effort will be to systematically upgrade and replace portions of the Department’s capital stock. It is important to stress that the Department does not need to implement a one-for-one platform replacement of all current inventories. The Department’s modernization and recapitalization program will be executed by:

- Injecting new technologies through service life extensions and technological insertions to modernize existing platforms, systems, and supporting infrastructure;
- Introduce new systems that substantially upgrade US warfighting capabilities;
- Replacing, on a limited basis, older systems on an in-kind basis without seeking to substantially improve or upgrade a given capability.”

• Source: USD (AT&L) Testimony to SASC dated 14 March 1995

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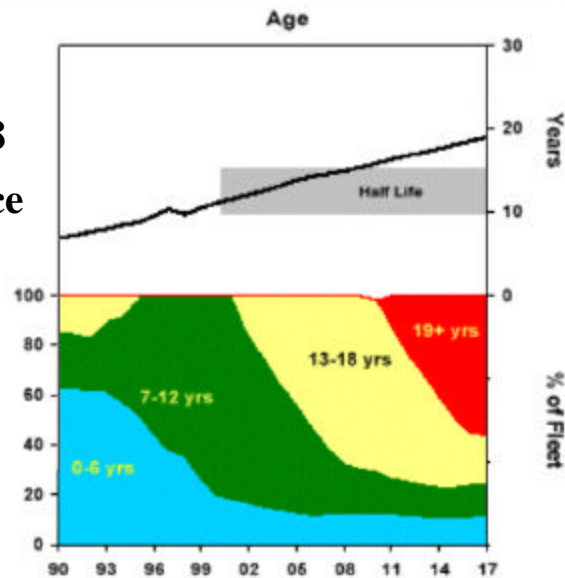
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# *OSD Half-Life Analysis – Tanks & IFVs*

- At Half-Life today
- Outside Half-Life band in FY08
- 60% of fleet at or beyond service life by 2017



5/26/99

*Defense Program Projection*

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## *Talking Points to OSD Half-Life Analysis*

### *The Half-Life Metric*

- Commonly understood to mean half of a system's expected service life, as determined by initial engineering estimates (usually 20 years).
- The Half-life Metric recognizes a positive correlation between the cost to maintain a weapon system and its age.
- The measure of success is to achieve and maintain an average fleet age at or below half the system's expected service life.
- Army's recapitalization policy attacks the problem of rising O&S costs associated with aging weapon systems by managing fleet half-life for selected systems.

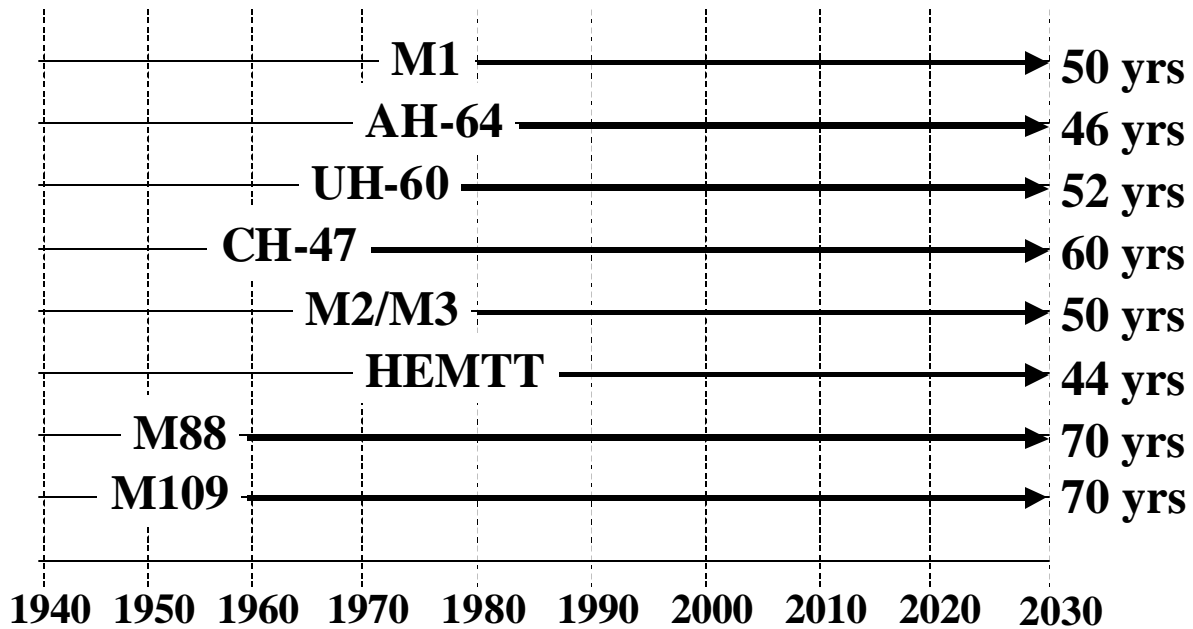
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# Army System Life Cycles



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## Talking Points to Army System Life Cycles

### The Half-Life Metric

- This chart depicts the top seven recapitalization priorities in The Army. Additionally, the M109 is also shown to demonstrate the age of the current artillery platforms and to emphasize that we have already skipped a generation of artillery modernization.
- For each system, the chart shows the date it entered The Army and the date age of the last system when it departs the Army inventory in 2032.
- As you can see, The Army's major systems will all be over 44 years old, while some will exceed 70 years of age.
- Since the average service life of a system when it enters the inventory is twenty years, something will have to be done to extend the service life of these systems.

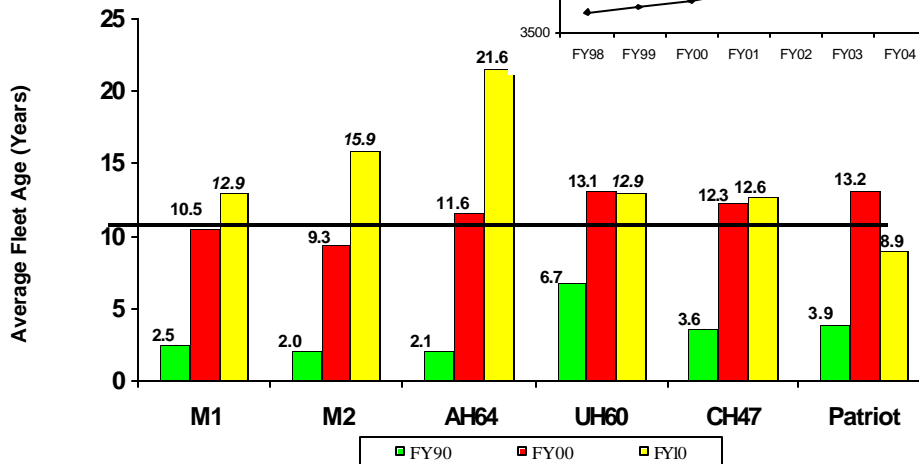
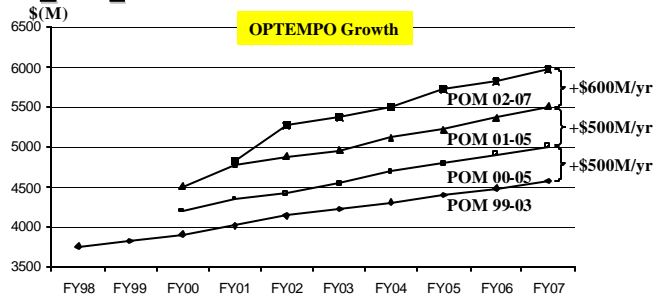
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# Aging Equipment

Cost per Hour/Mile			
System	FY96	FY99	Change
M1A1 Abrams	\$145	\$178	+22%
AH-64 Apache	\$4,763	\$6,164	+29%
UH-60 Blackhawk	\$1,374	\$1,334	-3%
CH-47D Chinook	\$1,944	\$2,485	+27%
M2/M3 Bradley	\$48	\$54	+13%



Goal is to maintain average fleet age at or below half of the expected service life (10 years = 1/2 life for most Army equipment)

**OPTEMPO costs have grown 30% over the last three years.**

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## Talking Points to Aging Equipment

- The Army's equipment is not only aging, it is becoming more expensive to operate.
- The Defense Program Projection, prepared annually by the Office of the Secretary of Defense PA&E has established the metric to maintain an average fleet age at or below half the systems expected service life.
- Most Army systems have an expected service life of twenty years, therefore the half-life of all the systems should be ten years. As the chart above shows, in 1990 the average age of the Army's major systems was from 2 to 6.7 years old. By FY 00, the average age of the equipment ranges from 9.3 to 13.2 years old. At the current funding levels, by FY 10, the Army's major systems will have an average age between 8.9 and 21.6 years old. Only the Patriot Air Defense weapons system will be below its half-life metric.
- In the upper left hand corner, you will see a chart that depicts what has happened to the cost of operating our aging equipment. Three of the five systems have had system costs rise by over 22%, while only one system has seen a drop in it's operating costs. Interesting enough, the UH-60 Blackhawk costs have dropped by 3% because of the efforts taken by the Army to convert older UH-60As into UH-60Ls through recapitalization.
- Finally, the chart in the upper right hand corner depicts the rise in OPTEMPO programming that the Army has had to fund over the past three years. While some of the cost growth is due to the addition of new technologies into our systems, a significant part of it is due to the rising cost of operating our older systems.

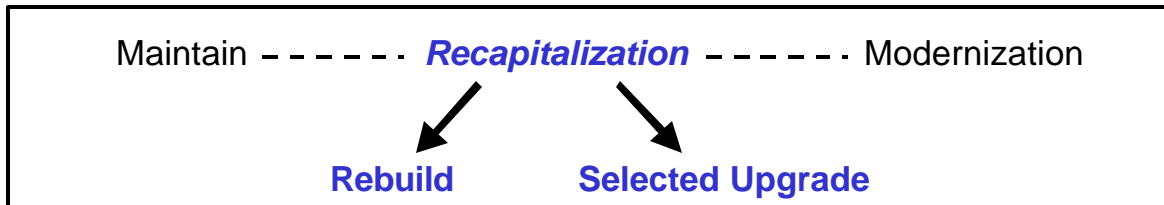


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# ***The Solution: Recapitalization***

- Definition: The rebuild and selected upgrade of currently fielded systems to ensure operational readiness and a zero time/zero mile system.
- Objectives:
  - Improved System Reliability, Safety, Maintainability, and Efficiency
  - Extended Service Life
  - Reduced Operating and Support (O&S) Cost
  - Enhanced Capability
- Technical/Engineering Data ↔ Components ↔ Systems
- OSD Half-Life Metric is the measure of success



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## ***Talking Points to The Solution: Recapitalization***

- The Army has changed its standard over the past year from Inspect and Replace Only as Necessary (IROAN), to rebuild to a zero time/zero mile standard.
- The Apache Helicopter is a good example for why we are going to this new standard. Under the old standard, we converted older model Apaches to the newer AH-64D (Longbow) model. However in doing this technology insertion, we only physically touched or replaced 30% of the aircraft's components. This has led to a large number of safety of flight messages that have grounded our Apache helicopter fleet five times in FY 00. Under our new standard, the aircraft would leave the recapitalization program as if it were brand new. In effect we will be rolling the "odometer" back to zero.
- Using a total system approach, we will not only be rebuilding the vehicles and aircraft, but we will also be overhauling our spare parts inventory and updating all of the technical and engineering data for that particular system. This will ensure that our repair parts system will be able to support the systems that we rebuild with components overhauled to higher standards.
- The following slide will explain to you the difference between our rebuild program and our selected upgrade program.

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# Recapitalization Programs

## Two Paths:

### Rebuild

### Selected Upgrade

**M1A1 AIM XXI\***

UH-60A

CH-47D

M9 ACE

M88A1

BRADLEY A2

PATRIOT

HEMTT

SEE

FIREFINDER

ELEC SHOPS

FAASV

SUSV

Zero Time/Zero Mile  
Maintenance Standard

Technology Insertion

Same Model-  
New Life

Zero Time/Zero Mile  
Maintenance Standard

Technology Insertion

Upgrade Warfighting  
Capability

New Model-  
New Life

**M1A2 SEP\***

UH-60L+

**CH-47F**

AVLB

HERCULES \*

BRADLEY A3\*

MLRS A1 \*

**HEMTT ESP**

D7 DOZER \*

**M113 A3 \***

**M915A4 \***

SCRAPER

HMMWV

**AH-64D**

Recap Programs prior to  
POM 02-07

31 Systems considered

-21 selected and prioritized

-10 not selected because:

- Met half-life metric
- Not cost-effective to recap; maintain only
- Retire before 2020

\* Currently in  
production

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## Talking Points to Recapitalization Programs

- The Army has two paths of recapitalization: Rebuild and Selected Upgrade
- Under both of these paths, the systems that enter the program will be rebuilt to a zero-time/zero-mile standard. Under both paths, new technology may be inserted, especially if that technology reduces the operating costs of the system.
- The difference between the two paths is that under selected upgrade, new warfighting capabilities will be added. This will result in the system being given a new model number.
- In the past, the Army would inspect the system, and repair only as needed (IROAN). This has led to maintenance problems only a few years after undergoing the previous overhaul. The Army believes the zero-time/zero mile standard will save money in the long run.
- Those systems highlighted in yellow were under the old Army Recapitalization Standard last year (IROAN). The other systems were added this year. Of the 31 systems considered, only 21 were selected for the Recapitalization Program.

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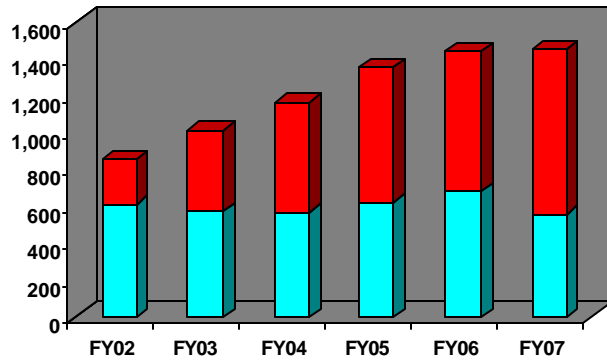


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# *Integrated Recapitalization*

## *New Standard, Increased Requirements*

### Combat Systems



{ M1 Tanks     *Patriot\**  
   M2 Bradley   MLRS  
   M113         FAASV

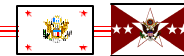
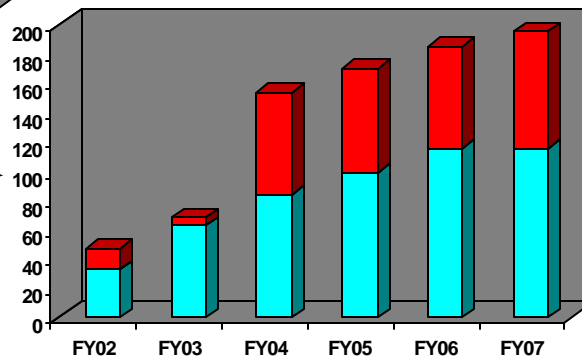
*Apache\**  
*UH-60\**  
*Chinook\**

**Funded Quantity**

**Unfunded Quantity**

**\* Objective Force Potential**

### Aviation Systems



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## *Talking Points to Integrated Recapitalization*

### *Combat and Aviation Systems*

- With this new recapitalization definition, metric, and zero-time standard comes new requirements. The Army began programming funds for this requirement this past year.
- 70% of the requirement is funded from FY 02 through 07, however, fewer than 70% of the systems will be recapitalized because those initially funded were high cost systems.
- Included in the Recapitalization Program are those systems that have the potential to transition to the Objective Force. Those systems are marked with an \*. The Army currently has no planned replacements for these systems.



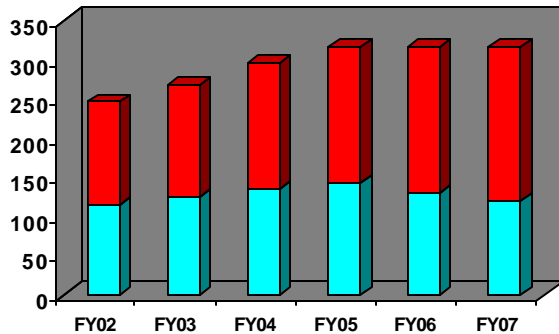
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# Integrated Recapitalization

## New Standard, Increased Requirements

### Combat Support Systems



{ AVLB SEE  
 M9 ACE Dozer\*  
 Firefinder Scraper\*

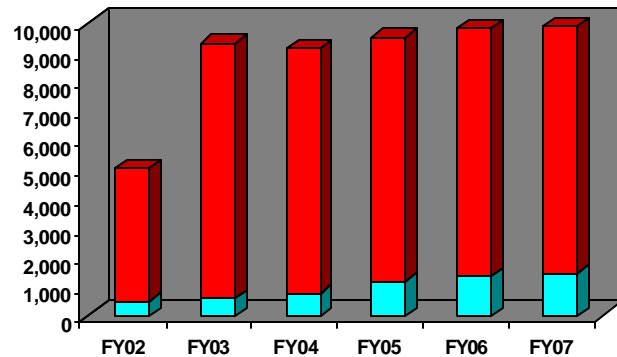
**Funded Quantity**

**Unfunded Quantity**

HMMWV\* M88  
 Elec Shop\* HEMTT\*  
 SUSV M915\*

\* Objective Force Potential

### Combat Service Support Systems



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## Talking Points to Integrated Recapitalization

### CS and CSS

- As opposed to the previous chart, which for the most part showed more systems funded than unfunded, our Combat Support Systems and Combat Service Support Systems do not show this same pattern.
- The Army's Deputy Chief of Staff for Plans and Operations has prioritized the 21 systems that will be recapitalized. Funding only existed to fund part of the requirements for the top 16 systems. The five systems that have no funding allocated to them through FY 07 are:
  - M992 FAASV
  - D7 Dozer
  - SUSV (Small Unit Support Vehicle)
  - Scraper
  - HMMWV
- As you can see, four of the five systems that are unfunded are Combat Support and Combat Service Support Vehicles and in the case of the HMMWV, there are tens of thousands of them in the fleet that must be recapitalized to meet the half-life metric.

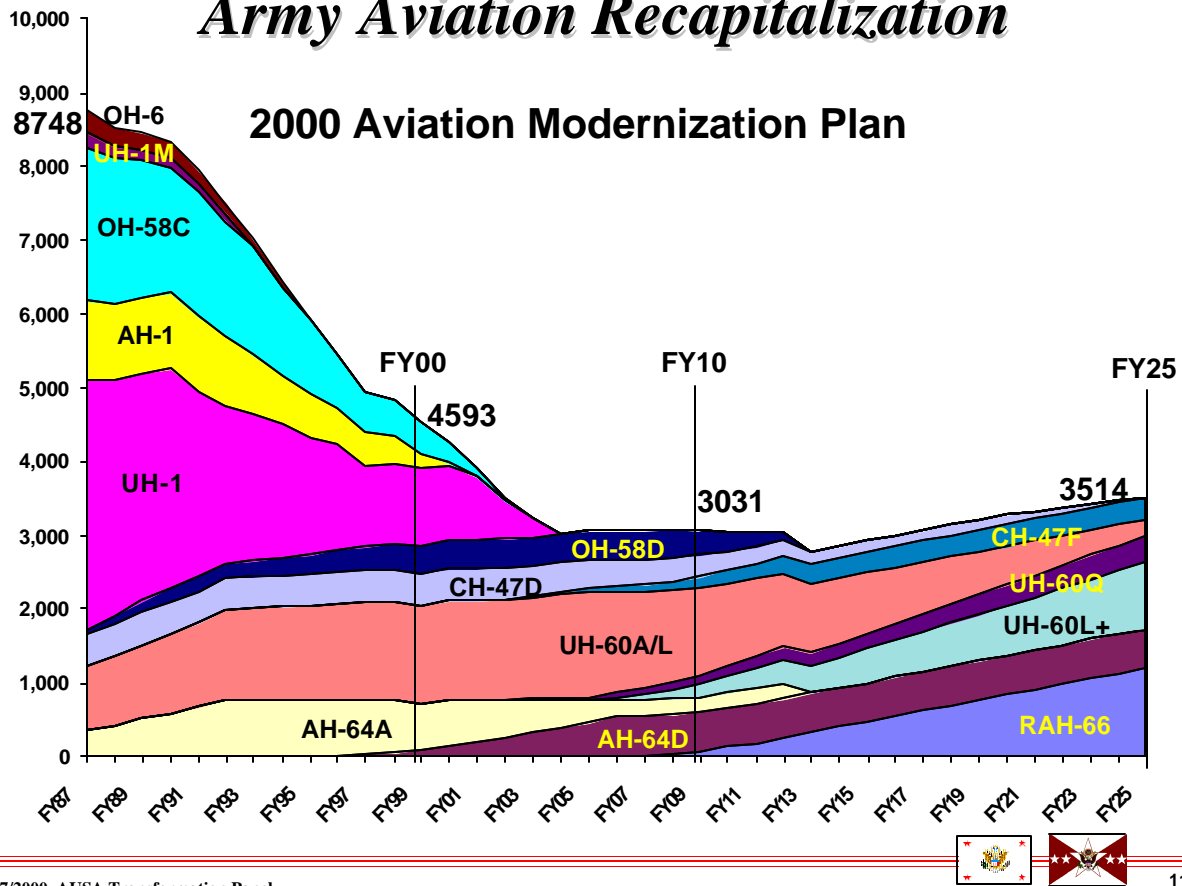
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# Army Aviation Recapitalization



## Talking Points to Army Aviation Recapitalization

- Retirement of older systems impacts on a system's half-life as well. Last year, Cobras and Hueys were projected to be in the force through 2015 and beyond. We are now retiring both systems earlier.
- In the last year, the VCSA directed the formation of the Aviation Readiness and Sustainment Task Force.
- The Army examined safety, readiness, sustainment, policy, and process issues and developed an aviation investment strategy to transform aviation to the Objective Force.
- In the past year, the Army program/budget:
  - Increases aviation funding \$1.3B
  - Begins Recapitalization programs for Longbow Apache, Blackhawk and Chinook
  - Fully funds Comanche
  - Accelerates legacy aircraft retirement:
    - Cobras (AH-1) – FY00
    - Huey (UH-1) – FY04
    - A-Model Apache (AH-64A) – FY13

# Teaming to Support Recapitalization

SYSTEM	OEM*	DEPOT
Abrams	GDLS	Anniston
Apache	Boeing	Corpus Christi
Blackhawk	Sikorsky	Corpus Christi
Chinook	Boeing	Corpus Christi
M88	UDLP	Anniston
AVLB	GDLS	Anniston
M9 ACE	UDLP	Anniston
Bradley	UDLP	Red River
MLRS	Lockheed-UDLP	Red River
Patriot	Raytheon	Letterkenny
M113A3	UDLP	Anniston
HEMTT	Oshkosh	Red River
SEE	Daimler-Benz	Red River
M915	Freightliner	N/A
Firefinder	Raytheon Systems	Tobyhanna
Electronic Shop	N/A	Tobyhanna
FAASV	UDLP	Anniston
Dozer	Caterpillar	N/A
SUSV	Haaglung	Red River
Scraper	Caterpillar	N/A
HMMWV	AM General	Red River

\* Teaming not restricted to OEM; Army seeks best value

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## Talking Points to Teaming to Support Recapitalization

- Listed in the chart above is the Original Equipment Manufacturer (OEM) and the Depot that supports each system.
- The Army will be seeking the best value during the recapitalization process and the teaming is not restricted to the OEM.
- There is tremendous opportunity for both industry and the Depots to collectively find the best ways to meet our recapitalization objectives of:
  - Improved System Reliability, Safety, Maintainability, and Efficiency
  - Extended Service Life
  - Reduced Operating and Support (O&S) Costs
  - Enhanced Capability

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# Conclusions

- **Recapitalization is a critical element of the Army Transformation**
- **Recapitalization integrates rebuild and selected upgrade programs**
- **21 Systems selected met age, readiness, and O&S cost criteria**
- **Fleet management will maintain average age at or below OSD Half-Life metric**
- **SSTS/STS—Components—Systems must be synchronized**
- **Army will do it right -- even if it means fewer systems/components are recapitalized**

**Recapitalization of the Current Force ensures Warfighting Readiness throughout the period of the Transformation.**

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## *Talking Points to Conclusion/Next Steps*

- **The Army is looking to institutionalize the recapitalization review process**
  - Assign Integrated Process Teams (IPT) for each system
  - Synchronize SSTS/STS, components, and systems
- **Continue evaluation and implementation of depot/industry partnerships**
- **Expand data collection to use actual miles or hours (vice years)**
- **Backwards plan recapitalization requirements from 2031**
- **Formalize and expand a strategic communications plan for recapitalization**
- **Reengineer repair and stockage determination processes to enhance supportability across the Army**
  - Define—Measure—Improve Methodology

**INVEST THE RIGHT AMOUNT IN LEGACY FORCE TO MEET WARFIGHTING REQUIREMENTS UNTIL SYSTEMS RETIRE**

\*SSTS: Sustainment System Technical Support  
STS: System Technical Support



10/17/2000 Transformation Legacy Force (Recapitalization)

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## *Soldiers On Point for the Nation*



*Persuasive in Peace, Invincible in War*

## **Army Modernization MG Bill Bond**

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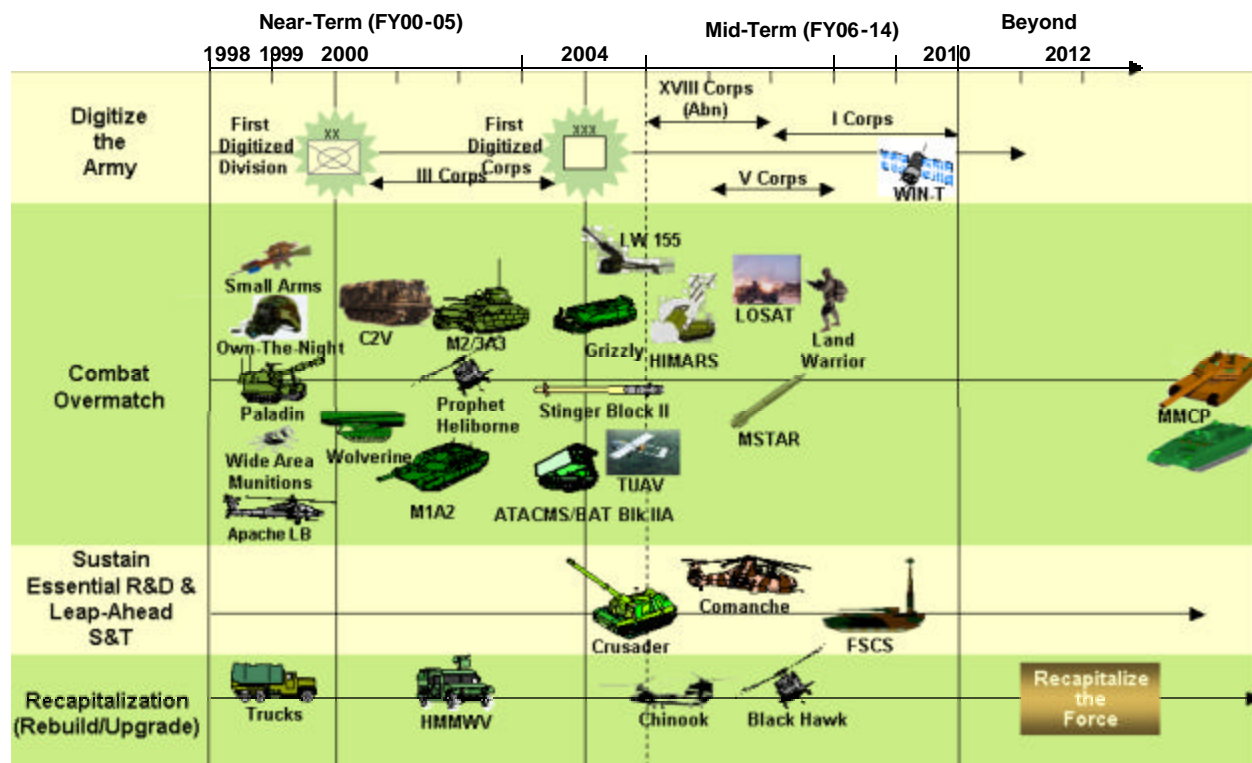
### **Talking Points to Cover Slide**

- **This briefing describes the Army's effort to Modernize in support of Transformation.**
- **It describes the incorporation of the three tenets of Army Modernization.**
  - ***MAINTAIN LEGACY WARFIGHT CAPABILITIES THROUGH OVERMATCH, DIGITIZATION, AND RECAPITALIZATION***
  - ***FOCUS S&T TO ENABLE TIMELY FIELDING OF THE OBJECTIVE FORCE***
  - ***TRANSFORM IN ORDER TO MEET WARFIGHTING REQUIREMENTS***

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# Pre-Transformation Modernization Plan



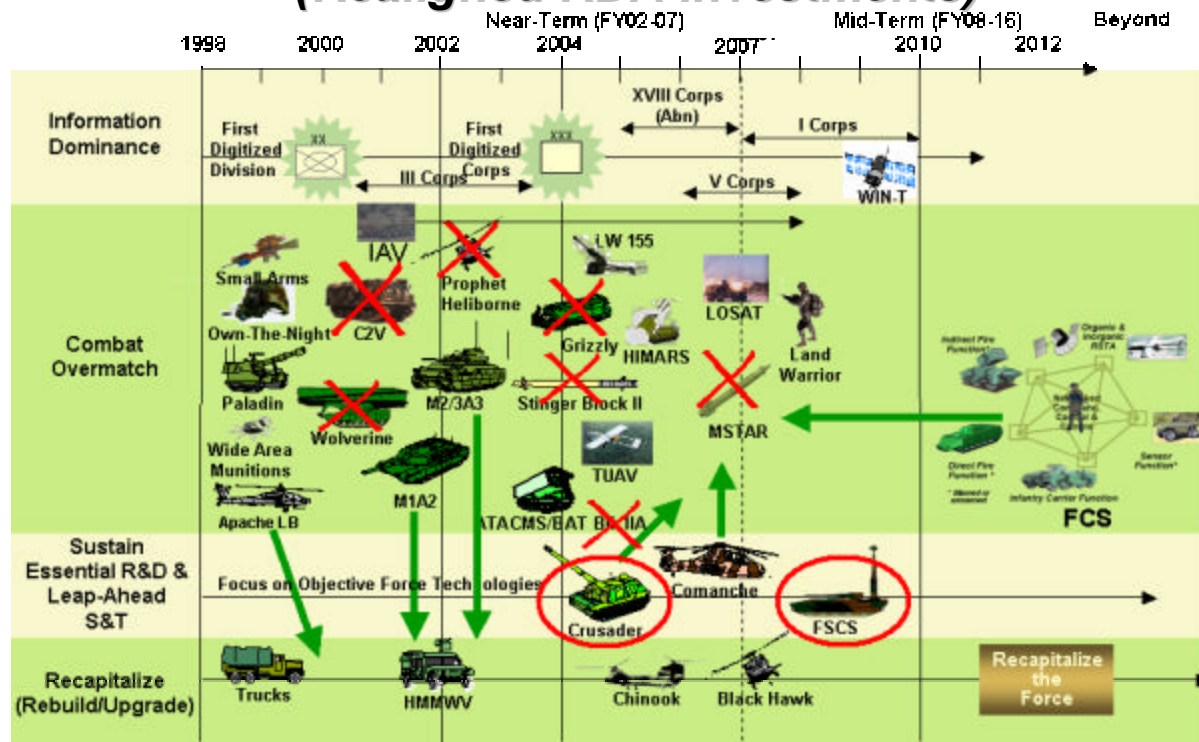
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## Talking Points to Pre-Transformation Modernization Plan

- Post QDR 97 view - Pre-Oct 99 Plan.
- Our priorities were digitization (Information Dominance) and then maintaining Overmatch.
  - Few new programs
  - Little recapitalization
  - The MMCP (Multi Mission Combat Platform), to be fielded as a replacement for tank, BFV and other systems, was not tied to S&T investments. This was criticized in QDR. It was projected to be fielded sometime in the 2020-2030 window.
- Force XXI and Army After Next were operational processes, that were separate but complementary.
- Modernization efforts coordinated through separate Light and Heavy Modernization Plans.
- Attempt was made to proceed along similar, not common, system and organizational designs.
- Based on prevailing geo-political environment and threat, pre-transformation force evolved into a split (light/heavy) force. Capable in the low and high ends of the conflict spectrum, once deployed to the theater.
- Capabilities gap existed and it needed to be addressed.

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# Transformation Modernization Plan (Realigned RDA Investments)



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## Talking Points to Transformation Modernization Plan

- The Transformation Modernization Strategy ensures capabilities are developed for the future while providing for the current force.
- Through kills and restructures, Army reallocated \$16B of resources to fund Transformation. Lots of anguish over these kills and restructures! We made hard choices. The systems killed remain requirements, but we assumed greater risk during the period of transformation. We have accepted risk in Combat Overmatch based on threat analysis!
- The Army headed in a new direction, with a clearer focus, and adjusted priorities. Through deliberate and thorough analysis, we realigned risk through application of existing or planned Army and/or joint capabilities (looked for potential redundancy) both inside and outside the Army. What can we do today, and what do we need to do in the future?
- We continued digitization as a priority, retaining FDD/FDC.
- We accelerated the future, moving it to the left!
- We acted on the clear need to recapitalize some existing systems.
- C-130 deployable became the crucible(<20 Ton System). This became one of the few, initially identified hard requirements for Objective Force systems.
- However, we are always trying to make sure we didn't go too far, or make the wrong decision. For example, over concern for indirect fire capability available to support the maneuver commander beyond 5KM and less than 40KM, and impact of MLRS Smart Tactical Rocket (MSTAR) kill, VCSA has directed an ammunition-missile review. These results, in final review now, may cause us to revisit some decisions.

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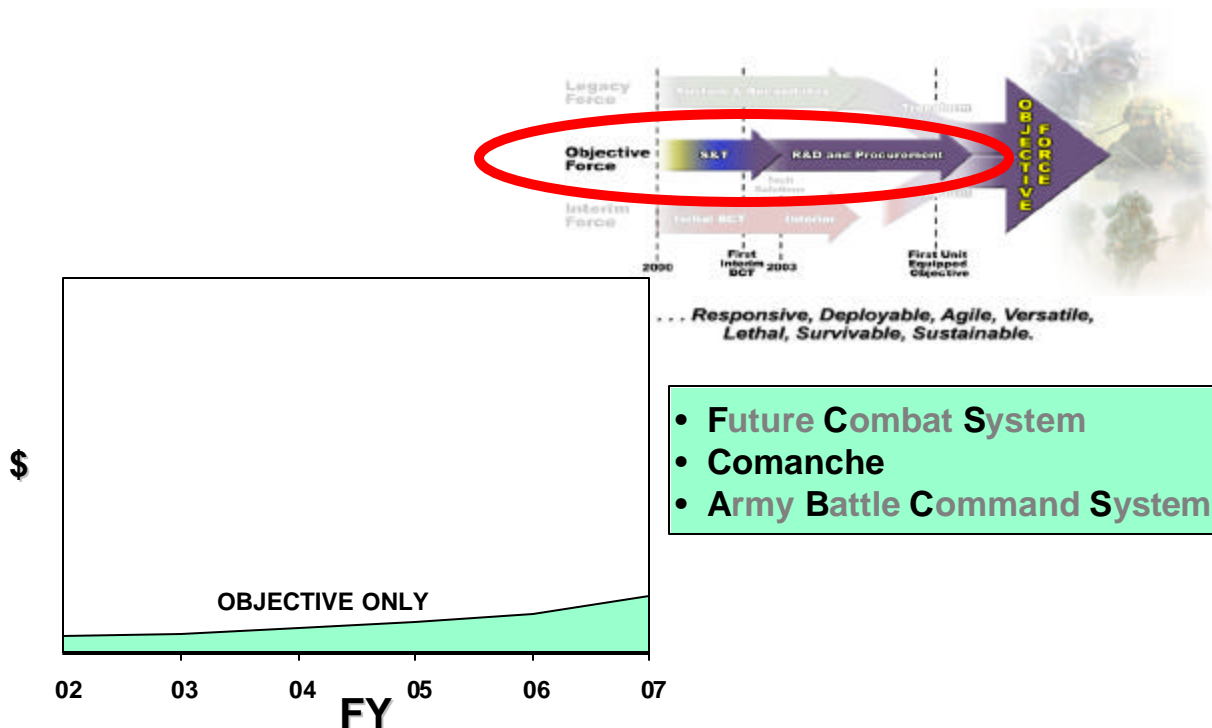
... **Responsive, Deployable, Agile, Versatile, Lethal, Survivable, Sustainable.**



- **Legacy Force Mod supports our modernization tenet: “MAINTAIN LEGACY WARFIGHT CAPABILITIES THROUGH OVERMATCH, DIGITIZATION, AND RECAPITALIZATION”.**
- **While transforming, we are accepting risk. Remember we must retain the ability to fight and win our Nation’s wars throughout the transition.**
- **Investment is limited to those critical mod actions necessary to retain, and in rare cases, enhance combat overmatch. We will do so by continuing to modernize selected units and systems.**
- **When we looked at the Legacy Force, we identified significant shortfalls. We needed to enhance the light forces’ capability through the fielding of selected systems. We must also increase the readiness of units while reducing O&S cost and enhancing system reliability.**
- **Tried to focus enhancement of the Legacy Force by identifying and prioritizing those systems that have applicability to the Objective Force, in effect Objective Systems fielded to the Legacy Force. (Includes trucks, small arms, C3I)**
- **But there were some new systems that must be continued, even if they aren’t expected to be part of the Objective Force. Current systems don’t provide needed capability and risk created by killing them would be too great. Systems like the HET, needed to replace an aging fleet of trucks that will carry the tanks, Bradleys, howitzers for the next 20-25 years. And to overcome a significant mismatch in our howitzers, field Crusader in limited numbers.**



# Objective Force Modernization



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## Talking Points to Objective Force Modernization

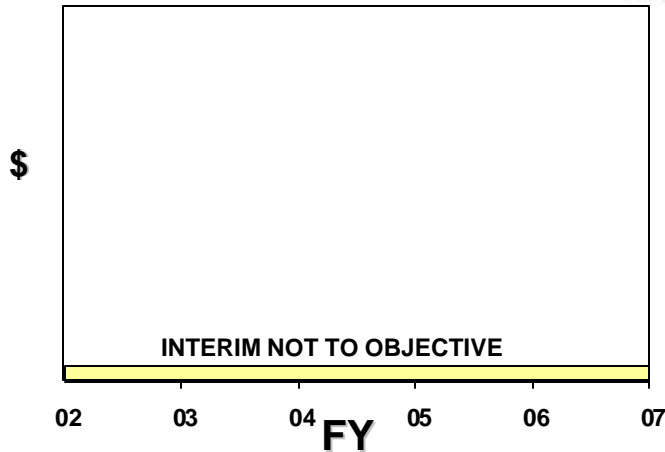
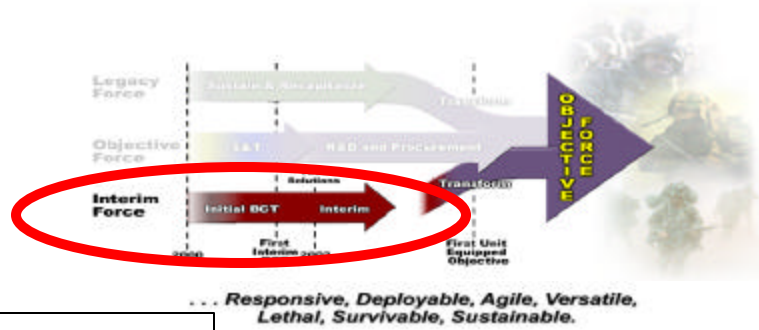
- The Objective Force does all those things required to meet the tenets of the Army Vision. It is our transformation objective. It is strategically responsive, and capable of employment immediately upon arrival in theater.
- Supports the Modernization Tenet “FOCUS S&T TO ENABLE TIMELY FIELDING OF THE OBJECTIVE FORCE.”
- 20% of funding through FY 07 is for the Objective Force. This is not a reflection of priority but of time, both time to develop and implement procurement programs, and the timing of when the money can be spent. Expect upcoming Future Year Defense Plans will increase funding for this component of the transformed force.
- Shown here are three representative systems of the Objective Force, while the full list of Objective Force equipment is yet to be identified, these three will be critical components.
- They represent the ground and air legs of the force and the integrated C4ISR that allows it to reach desired capability.
- The Comanche is often overlooked as an Objective Force system, although it remains the quarterback of the internetted, interoperable Objective Force.
- Also shown later is the funding of Objective Force Systems being fielded to the Legacy Force. Together these constitute almost 2/3rds of the RDA account through FY 07.



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# Interim Force Modernization



- Interim Armored Vehicle

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## Talking Points to Interim Force Modernization

- Interim Force fills a capabilities gap.
- Supported by Modernization Tenet “TRANSFORM IN ORDER TO MEET WARFIGHTING REQUIREMENTS”.
- All \$ shown on chart are IAV funds.
- System fielded to IBCT, except IAV are either legacy or objective systems.
- Legacy Modernization Systems also in the IBCT Include:

- HMMWV
- Light/Medium Tactical Vehicle
- Firefinder Radar
- LW 155
- Mortar (81/60MM)
- SINCGARS
- EPLRS
- AMDWS
- Mortar Ballistic Computer (MBC)

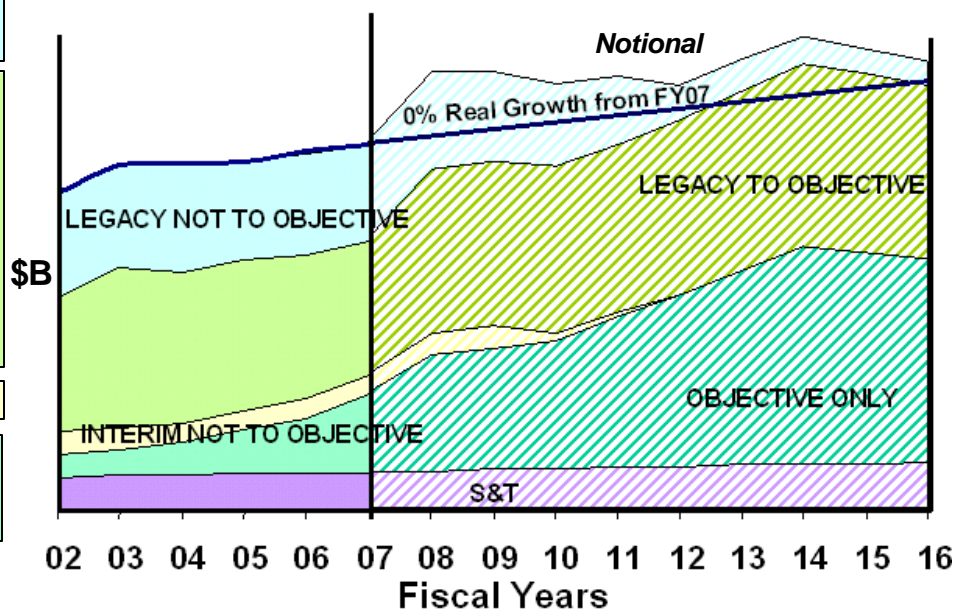
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# RDA Investment

## Modernization

CRUSADER HET
ATACMS-BAT LW 155 FMTV HIMARS LOSAT TUAV Javelin JTRS
IAV
FCS COMANCHE WIN-T



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## Talking Points to RDA Investment

- Army RDA contains over 225 different programs. All of these programs can be categorized as modernization, recapitalization, or maintenance. They can be further subdivided into where they will initially be fielded (legacy, interim, objective) and whether the system will remain in the objective force.
- This chart depicts the aggregate RDA investments for S&T, Objective, Interim and Legacy systems through the Extended Planning Period (EPP). Starting in FY08 there is an expanded funding requirement due to system pushes and new starts. We can no longer live with a zero real growth constraint through the EPP. Although a small bow-wave may exist now, it must grow in the future as the Objective Force requirements mature.
- Army Investment Strategy implements the modernization vision and strategy. It incorporates the three modernization categories (Mod/Recap/Maintain) with the three modernization tenets (previously discussed).
- The Key- It is going to take some time to get to the Objective Force. From the time we begin conversion to OBCTs
  - Non-Counterattack Corps BCTs out in 10 years
  - Counterattack Corps BCTs out in 15 years
  - ARNG BCTs out in 21 years
  - IBCTs out in 30 years
- But the Army is serious about moving to the Objective Force. We have focused our \$ to achieve it!

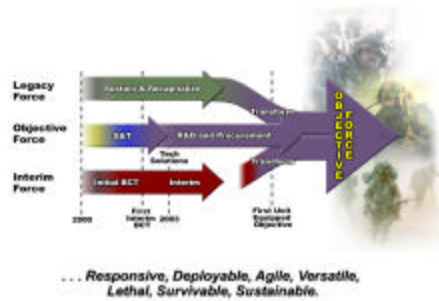
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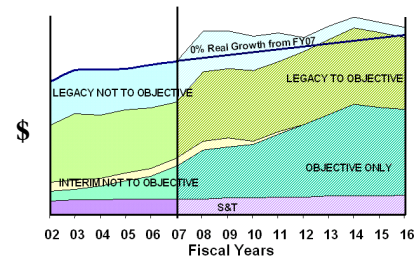


# Bottom-Line Summary

## Transformation



## Investment Strategy



- Killed and restructured programs to support Legacy Force Transformation to the Objective Force
- Ensured continuous Combat Overmatch to support the National Security Strategy
- Focused investment strategy on transforming the Army to the Objective Force

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## Talking Points to Bottom-Line Summary

- Killed and restructured programs to support Legacy Force Transformation to the Objective Force
- Insured continuous Combat Overmatch to support the National Security Strategy. Focused investment strategy on transforming the Army to the Objective Force.
- Refocused efforts on legacy systems (tanks, Bradleys, helicopters) to ensure system upgrades include recapitalization to a zero-time standard to maintain viability.
- 68% of overall Army Transformation was funded through FY 07 - need additional \$ to get to the Objective Force.
- RDA directs 2/3 of funding to the Objective Force through FY 07.
- RDA & EPP directs 80% to the Objective Force.
- We are taking risk – balancing that risk across all three axes is the key.

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*Soldiers On Point for the Nation*



*Persuasive in Peace, Invincible in War*

## ***Objective Force***

***LTG Paul J. Kern***

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### **Talking Points to Cover Slide**

- The Objective Force is a term that encompasses a complete transformation of the U.S. Army.
- The Objective Force will include more than just new combat systems. It also includes a new organization, new training techniques and a new new way of conducting warfare.
- This briefing is focused only on those science and technology efforts underway to develop the future combat systems of the Objective Force.

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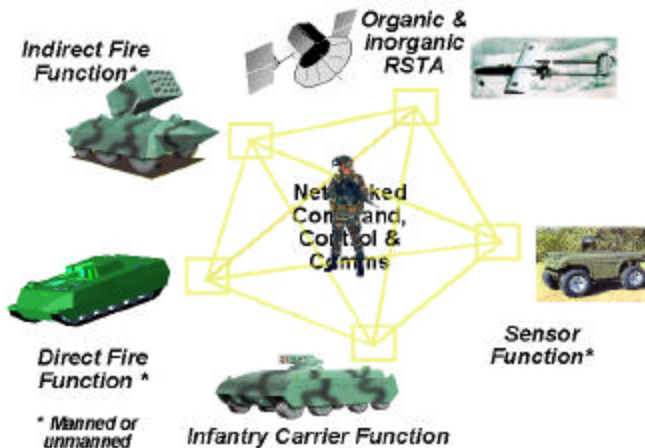
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# ***Future Combat Systems... A Systems of Systems Approach***

***Notional Systems Construct  
... Not Platform Centric***



***DARPA / Army  
Collaboration  
...A \$2.7B Investment***

***- DARPA: high risk  
& innovative  
approaches  
- Army: accelerates  
high-payoff core  
technologies***

***Overwhelming Organizational Combat Power***

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## **Talking Points to Future Combat Systems... A Systems of Systems Approach**

- Army and DARPA S&T will invest ~ \$3B in the FCS program and FCS enabling technologies from FY 02-07.
- FCS is envisioned to be a system of systems relying on a network-centric approach to meeting the Army's requirements.
- The Army and DARPA have signed a Memorandum of Agreement establishing a collaborative program to development and demonstrate the FCS. The program is co-funded by the Army (\$510M) and DARPA (\$406M) over its six-year life (FY2000-2005).

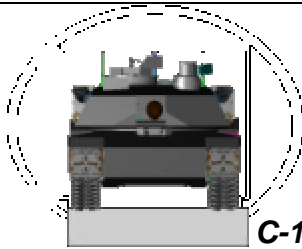
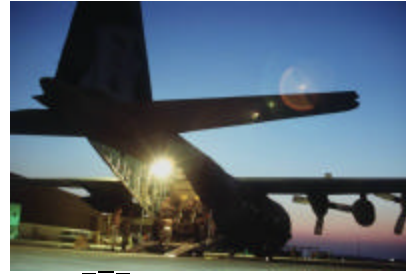
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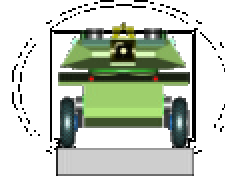
# FCS Requires Operational and Technology Innovation

- **Strategically/Tactically Mobile**
- **Command and Control on the move**
- **Lethality**
- **Survivability**



C-17/C-5

Fit the C-130  
"Crucible"  
**Science  
&  
Technology**



C-130

**Up to:  
70% Lighter  
50% Smaller**

## **Current System**

- **70 tons**
- **650 Cubic Feet Internal Volume**
- **36 tons (51%) for structure & protection**

## **Future Combat Systems**

- **< 20 tons**
- **300-400 Cubic Feet Internal Volume**
- **< 9 tons (~45%) for structure and protection**

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## Talking Points to FCS Requires Operational and Technology Innovation

- The FCS must have Abrams tank equivalent (or better) lethality and survivability in a smaller, lighter package, able to deploy in less time than current forces.
- FCS must fit within the C-130 cargo volume and weigh not more than 20 tons.

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# Develop Full Range of Technology Options for FCS



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## Talking Points to Develop Full Range of Technology Options for FCS

- Future Combat Systems (FCS) are envisioned to be a multi-mission combat system capable of supporting the full spectrum of missions.
- Army S&T will develop and mature key high payoff technologies to support the FCS desired functions identified by the oval in the center of the chart.
- The best technologies will be incorporated into FCS. Those not ready for initial FCS production will be incorporated as upgrades.

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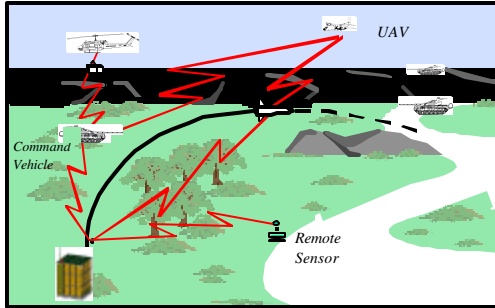


**5**

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# Lethality Through...

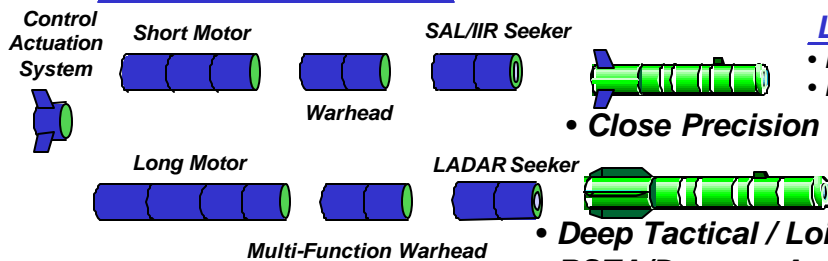
## Beyond Line-of-Sight Networked Fires



### Pacing Technologies:

- **Sensors**
  - Uncooled Infrared (Precision Endgame)
  - 3-Dimensional Laser Radar RSTA/ATR
- **Guidance and Control**
  - Precision Miniature Inertial Guidance
  - Networked 2-Way Data Link
- **Container**
  - Plug-n-Fight (Data and Power)
  - Rocket Motor Gas Management
- **Propulsion**
  - Solid Pintle (Variable Thrust)
  - Miniature Turbojet (Loiter)

### Common Modular Missile for Multi-Mission Capability



### Containerized for Lower Life Cycle Costs

- Reduced Logistics
- Platform Independent

### • Close Precision

### • Deep Tactical / Loiter

### • RSTA/Damage Assessment



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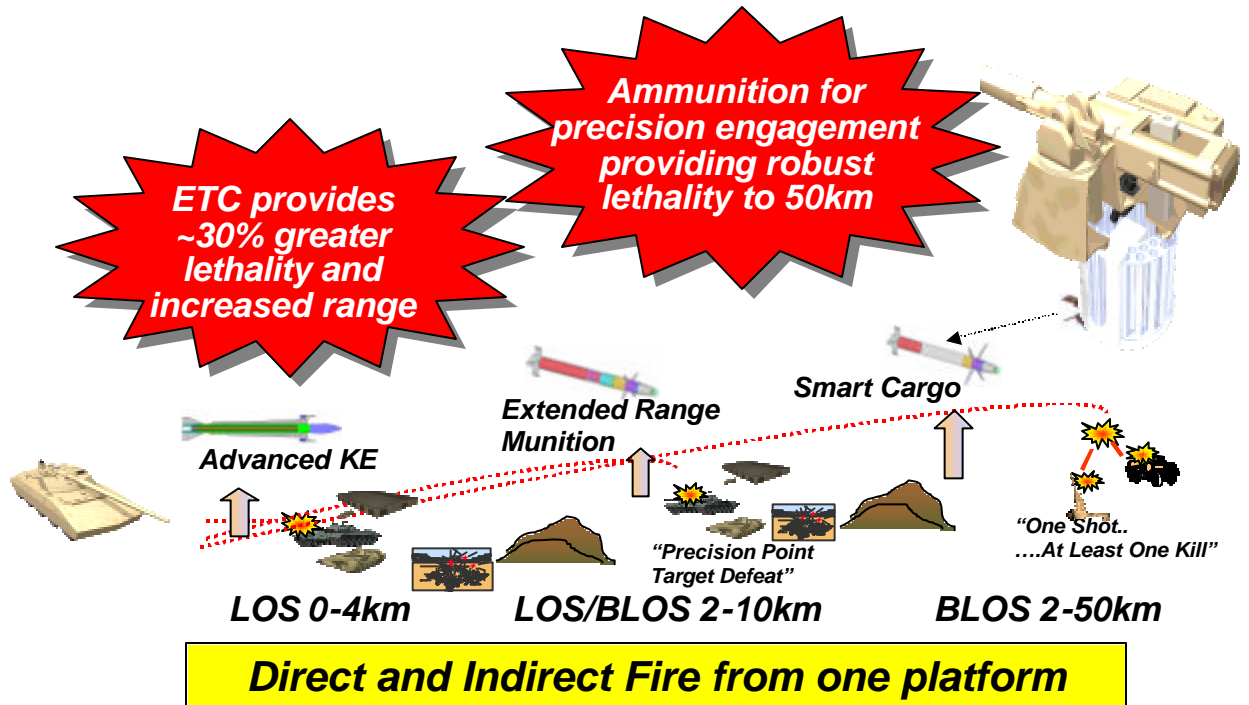
## Talking Points to Lethality Through... Beyond Line-of-Sight Networked Fires

### Extended range BLOS fires for the Future Combat Systems

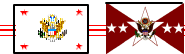
- Enhanced missile performance and operational flexibility
- Non-line-of-sight and lock-on-after-launch capabilities
- Continuous “hunter/killer” munitions capability
- Containerization and platform independent launch

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# Lethality through... Multi-Role Armament System



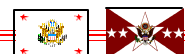
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## Talking Points to Lethality through... Multi-Role Armament System

- Multi-role armament system technologies will allow a single delivery system to engage at close range or to deliver precision lethality at threats up to 50kms using a variety of advanced munitions.
- New technology will give the FCS comparable lethality to the Abram's 120mm cannon with only a 105mm cannon.

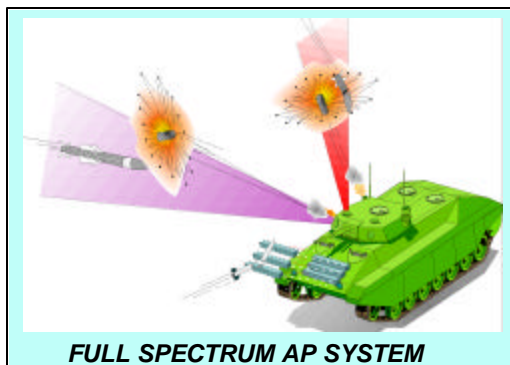
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# Survivability through....

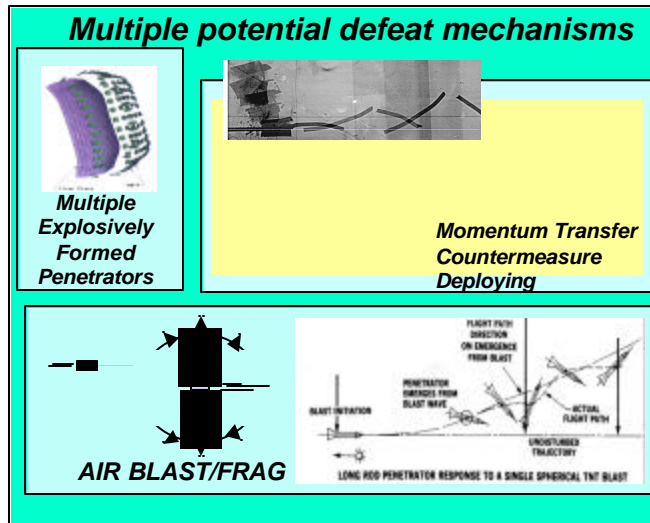
## Full Spectrum Active Protection



Search-and-track dual frequency radar...  
Millimeter Wave Integrated Circuit (MMIC) technology



High speed launcher... electronically-actuated, stabilized gimbals



**Defeat of Chemical Energy (CE) & Kinetic Energy (KE) threats**

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## Talking Points to Survivability through.... Full Spectrum Active Protection

- Passive armor provides significant protection, but does not fully address the problem of momentum transfer.
- An active protection system (APS) will also be used to defeat the full spectrum of chemical energy (CE) and kinetic energy (KE) threats.
- Defeat mechanisms include multiple explosively formed penetrators (for CE), a momentum transfer mechanism (for KE) to destroy or disrupt the incoming round, or air blast (for KE) to cause the incoming round to miss.

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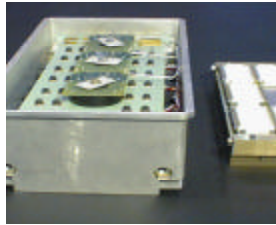
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# ***Mobility through.... Combat Hybrid Power System***

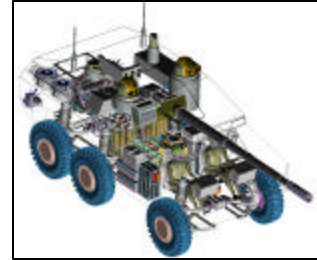
**Objective: Demonstrate integrated hybrid electric power and propulsion system for a 20 ton combat vehicle.**



**System Integration  
Laboratory (SIL)**



**Technology**



**Virtual Prototype**

**Pacing Technologies:**

- Hybrid System Architecture
- Control Strategies for Power Management
- High Power and Energy Density Components - *Batteries, Capacitors, Converters, Flywheels*

**Warfighter Payoffs:**

- Improved mobility, survivability, lethality
- Reduced logistic footprint and increased sustainability
- Rapid deployability
- Reduced Logistics Burden

***Compact, Fuel Efficient Power for FCS***

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## **Talking Points to Mobility through.... Combat Hybrid Power System**

- Hybrid electric vehicles can use a smaller power plant to handle normal operating loads, like steady state motion or operation of auxiliary equipment.
- The Combat Hybrid Power System (CHPS), demonstrates integration of Silicon Carbide semi-conductors, and Lithium Ion batteries to enable reduction of future propulsion system volume by 25 percent.
- The current hybrid electric HMMWV out accelerates the standard HMMWV and saves fuel.

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# ***Reducing Soldiers' Risk Through... Controlled Autonomous Robotic Systems***

Today...



FCS...



***Technologies contributing to increasing performance:***

- ***Machine vision algorithms***
- ***High resolution sensors and sensor fusion algorithms***
- ***Advanced commercial processors***

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## **Talking Points to**

### **Reducing Soldiers' Risk Through... Controlled Autonomous Robotic Systems**

- The integration of robotic systems into FCS will allow us to achieve multiple goals:
  - reduce the risk to soldiers by removing them from high threat situations
  - reduce vehicle weight and volume through elimination of crew stations
  - reduce logistics demand (for crew water and food).

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# ASB Technology Assessment

## (Can We Get There By 2010?)

OPERATIONS		C4ISR		SUSTAINMENT	
Robotic Vehicles		Sensors(EO/IR, Radar)	GREEN	Logistics	GREEN
Follower	GREEN	Sensor Fusion	YELLOW	Supply Chain	GREEN
Semi-Autonomous	YELLOW	Automated Target	YELLOW	Hybrid Electric	
Autonomous	RED	UAV (FW or VTOL)		Diesel	GREEN
Fires	GREEN	Long Endurance	GREEN	Fuel Cell	YELLOW
FTR	YELLOW	Short Endurance	GREEN	H2O from	YELLOW
Lethality		Mini/Micro	YELLOW	High Reliability	GREEN
Gun	GREEN	Network Building Blocks	GREEN	Tactical Air Lift --	
Missiles	GREEN	Communications	GREEN	SSTOL	YELLOW
EML	RED	Battle Management	GREEN	FTR	YELLOW
DEW	YELLOW				
Networking	GREEN				

TRAINING	
Embedded Training	GREEN
Networked Training	YELLOW
Wireless Networked Training	YELLOW
Emulation	RED
Full Mission Rehearsal	YELLOW

Available < 2006	16 of 32	50%	including "Pacing Technologies"
Available 2010 - 2015	13 of 32	41%	
Not available until >2015	3 of 32	9%	

Source: ASB Assessment – June 2000

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## Talking Points to ASB Technology Assessment ... Can We Get There By 2010?

- In June of 2000, the Army Science Board conducted a Technology Assessment of the major technologies involved in Army Transformation.
- ASB assessed 32 Future Combat System enabling technologies. Sixteen technologies were assessed to be ready for 2006 EMD and another 13 available for integration as upgrades in 2010-15 timeframe.
- The "Pacing Technologies" were assessed as ready in 2006.
- Technologies available between 2010 – 2015 included: Semi-Autonomous Robotics; Directed Energy; Automated Target Recognition; Hybrid Electric Fuel Cell propulsion and Wireless Networked Training.
- Only three technologies were rated as "Red," not available until >2015. These were Autonomous Robotics, Electro-Magnetic Gun Launch, and Training Emulation.



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## *Summary*

- ***FCS is The Army's First Priority***
- ***S&T is Creating Technology for the Future***  
***We Will Do Things We Have Never Done Before***
- ***FCS Will Create Full Spectrum Capability for a Strategically Responsive Force***

***Army S&T... Accelerating the pace of Transformation***

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## **Talking Points to Summary**

None

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*Soldiers On Point for the Nation*



*Persuasive in Peace, Invincible in War*

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## *Interim Force* *MG Jim Grazioplene*

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### **Talking Points to Introduction**

- This briefing is a summary of Interim Force and its significance to Army Transformation.

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10/17/2000 Transformation Interim Force Brief

10/17/2000 – Transformation Briefing



1



# Interim Force



**Get there....**



**Get there in time....**



**Get there in time with what  
you need**

---

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2

## Talking Points to Interim Force

- **Shortfall capability exists to provide Warfighting CINCs with a rapidly responsive, lethal, credible warfighting capability which is decisive in SSCs**
- **Shortfall was evident in Desert Storm, Bosnia-Herzegovina, Mogadishu, and Kosovo**
- **Operational environment demands “neighborhood-level” Situational Awareness**
- **Interim Force must also have substantial utility in MTWs**

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2

# Inability To Get There In Time With Decisive Capability

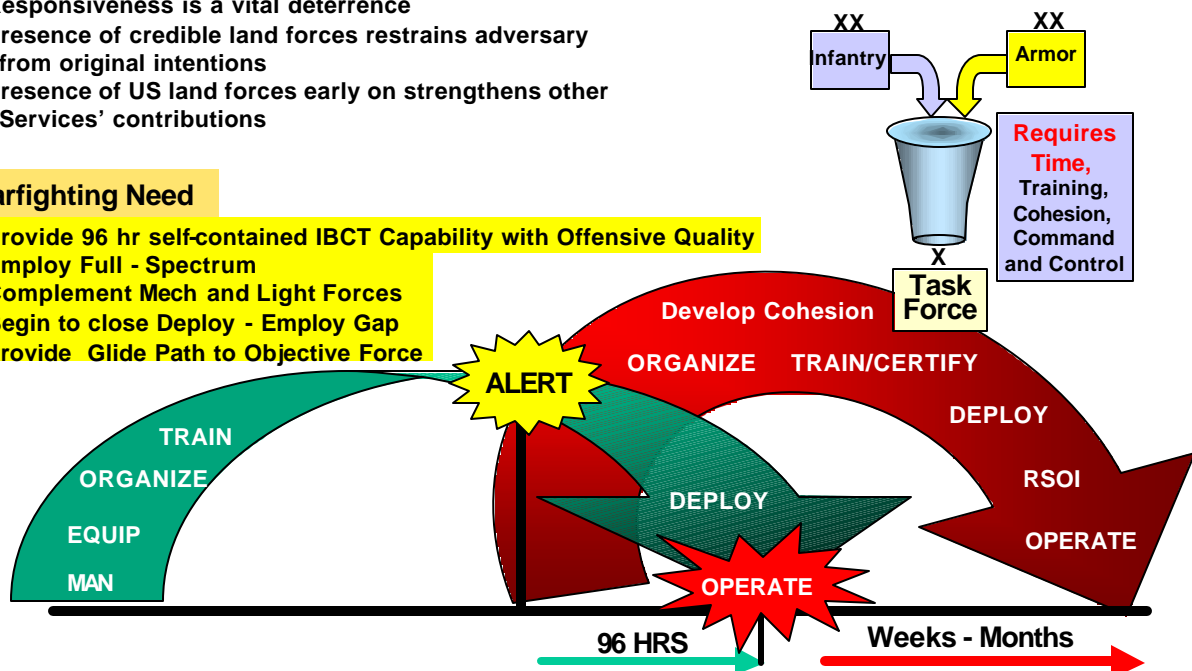
In Crisis Response....TIME Is Critical Factor of Success

## Army Transformation Insights

- Side that controls time and tempo has more options
- Responsiveness is a vital deterrence
- Presence of credible land forces restrains adversary from original intentions
- Presence of US land forces early on strengthens other Services' contributions

## Warfighting Need

- Provide 96 hr self-contained IBCT Capability with Offensive Quality
- Employ Full - Spectrum
- Complement Mech and Light Forces
- Begin to close Deploy - Employ Gap
- Provide Glide Path to Objective Force



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3

## Talking Points to Inability to Get There In Time

- The CSA has identified some fundamental imperatives.
- Across the spectrum of operations, it boils down to four simple rules of thumb:
  - In every case, we want to initiate combat on our terms ... at a time, in a place, and with a method of our choosing.
  - Next, we want to gain the initiative, and never surrender it
  - Third, we want to build momentum quickly
  - Finally, we want to win decisively
- History demonstrates that boots on the ground is the only credible deterrent. The IBCT enhances the contributions of the other services

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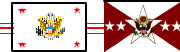
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# IBCT Core Qualities

- Strategic Responsiveness ... 100% tactical mobility
- C-130 deployable
- Combat capable upon arrival
- Decisive offensive action ... dismounted infantry platforms and fires ... internetted Combined Arms Company teams
- Have superior Situational Awareness
- Optimized for close, complex or urban terrain...poor infrastructure
- Full Spectrum capable
- Proactive, responsive Counter-Battery
- Holistic survivability and force protection
- Platform commonality, reduced sustainment footprint ... dynamic resupply ... anticipatory logistics
- Reachback
- Hybrid teaming; level of autonomy
- Glidepath to the Objective Force

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## Talking Points to IBCT Core Qualities

- Strategically Responsive timelines require a force which can be deployed by air or transported by sea.
- IBCT must be self-contained and immediately capable of combat operations upon arrival.
- Interim Force must be able to enter and operate in areas with limited infrastructure. Must be able to bypass major air/sea ports of debarkation
- Must be 100% mobile and agile. Capable of moving extended distances quickly and operating an expanded Area of Responsibility
- IBCT enables the glidepath to Objective Force by providing operational insights for a rapidly deploying force capable across the full spectrum of operations.

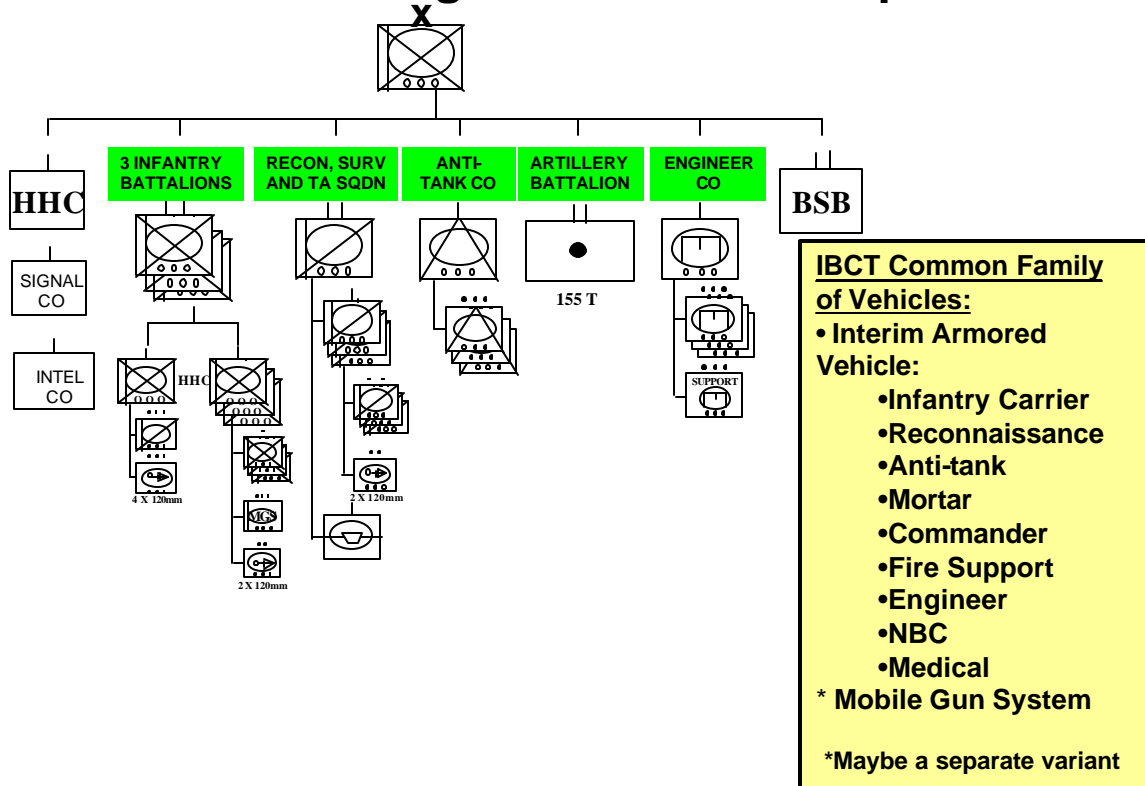
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# IBCT Organizational Concept



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## Talking Points to IBCT Organizational Concept

- The brigade is designed with specific operational and organizational capabilities.
- The essence is combined arms at the company level comprised of infantry, mobile gun systems, mortars, anti-tank weapons, and snipers.
- This is an Infantry-centric organization conducting dismounted assaults, internettted for “Point and Shoot.”
- WHY? The brigade increases its survivability through situational awareness and understanding the environment. This organization does not fight the traditional movement to contact; develop the situation; then, engage.
- The IBCT deploys very rapidly, executes early entry, and conducts effective combat operations immediately on arrival to prevent, contain, stabilize, or resolve a conflict through shaping and decisive operations.

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# Commonality

Degree of Commonality will produce:

- Increased soldier flexibility on the battlefield
- Ease of sustainability and maintainability
- Decreased logistical footprint
- Decreased Deployability requirements for classes of supply
- Simpler institutional training
- Reduced MOS proliferation (enhanced tooth-to-tail ratio)
- Common tactical mobility and agility profile
- Common battlefield signature

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## Talking Points to Commonality

None

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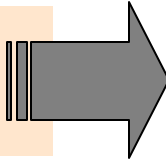
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# What is Different

## AOE

- Make Contact
- Develop the Situation
- Maneuver the Forces



## IBCT

- Understand the Situation
- Move the Forces
- Make Contact

### FROM

Alert – Train – Deploy

RSOI

If you think you might need it  
take it

Joint defined as Interoperability

Planning centric

Relies on Task  
Organization

Leaders are essential

### TO

Train – Alert – Deploy

Fight Immediately

Take just what you need and  
the rest will be provided

Joint defined as Interdependence

Execution centric

Self-contained organic  
capabilities and reachback

Leaders remain essential

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## Talking Points to What Is Different

Today we must either coordinate or task organize to get the  
Complementary combat power needed to ensure overmatch.

This comes at a cost:

- New team dynamics – ad hoc relationships
- Command and control overhead
- Uncertain or untimely access to combat multipliers
- Unit cohesion

The Interim forces eliminate these shortcomings and allows for  
synergistic combination of maneuver, fire power and protection,  
with leadership being our multiplier.

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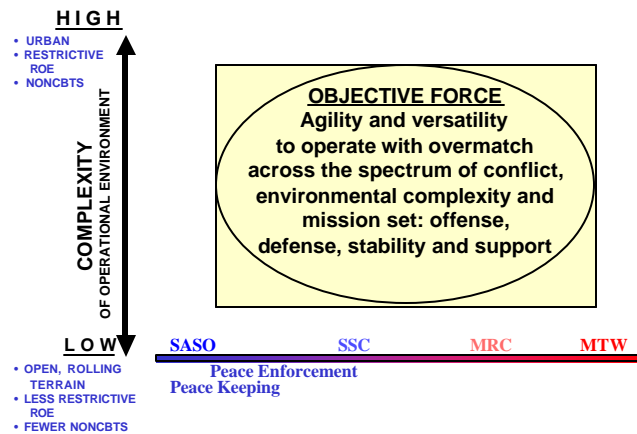
# Road to IBCT IOC: Glide Path



## Talking Points to Road to IOC

- The reorganization and developmental training phase consists of:
  - Developmental training to “validate” O&O and provide DTLOMS feedback
  - Uses initial draft skill manuals and MTPs
  - Includes: sustainment tng for leader, special skills, digital skills; selected FBCB2/ATCCS tng
  - Builds expertise in TRADOC schools for leverage later
  - Begins practice of Higher HQs links
  - Assumes sufficient surrogates and loaners available in phases to fit training needs
  - Foundation for Pre-CTC training
- The operational training and CTC rotation phase consists of:
  - Build on developmental training
  - Conducted on and off of Fort Lewis
  - Includes: sustainment training in leader, special skills, and digital skills
  - Practice of higher HQs links
  - Uses final coordinating drafts of skill manuals and MTPs
  - Some New Equipment Training Team (NETT) and Integrated Logistics Overhaul (ILO) preparation starting Nov 00
  - Brigade Command Battle Staff Training and Combat Training Center experience

# Interim Force Glide Path to Objective Force



- Increased agility
- Reduced specialization → multi-functionality
- Common organizational design
- Common platform and equipment
- Infusing technology to perform low order but higher complexity tasks
- Increased responsibilities / tasks by junior leaders

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## Talking Points to Interim Force Glide Path to Objective Force

None

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*Soldiers On Point for the Nation*



*Persuasive in Peace, Invincible in War*

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## ***Conclusion***

### ***BG Ross Thompson***

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**Talking Points to the Cover Slide**

**None**

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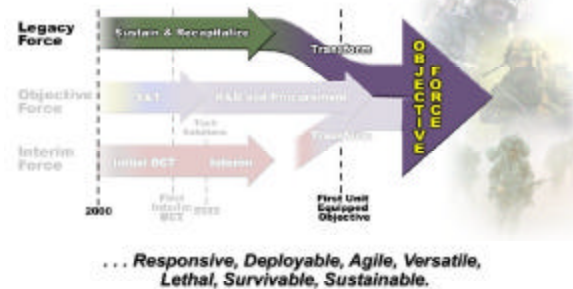
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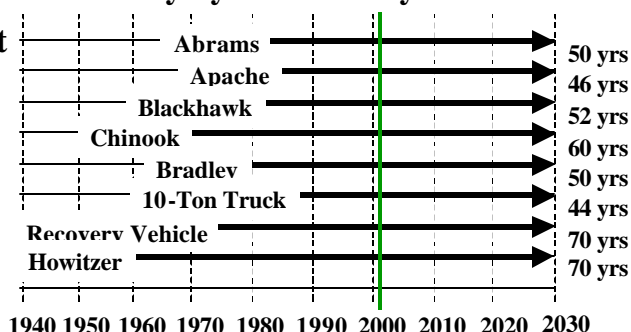
# The Army Transformation

## Legacy Force

- Guarantees near-term warfighting readiness to support the NMS.
- Rebuilds and selectively upgrades 21 existing systems.
- Invests the right amount to provide more reliable and capable systems in like-new condition.
- Modernizes the force to ensure combat overmatch while we Transform.
- Many systems will transition to the Objective Force.
- Operational shortfall – inability to get forces on the ground quickly with the requisite combat power to influence a potential crisis.



Army System Life Cycles



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## Talking Points to the Legacy Force

- The Legacy Force is The Army as it is currently configured and is what guarantees near-term warfighting readiness to support the National Military Strategy.
- While the United States Army remains the most powerful and respected landpower in the world, there are many demands that must be met to keep it strong. One of the big challenges with the Legacy Force is the age of the equipment. Today, 75% of The Army's major combat platforms exceed their half-life. The Army System Life Cycles chart depicts how long systems will have been in the Army inventory at the year 2030.
- When we looked at the Legacy Force, we identified significant modernization shortfalls. We needed to enhance the light forces' capability through the fielding of selected systems. We also had to increase the readiness of units while reducing O&S costs and enhancing system reliability.
- We focused our enhancements of the Legacy Force by identifying and prioritizing those systems that have applicability to the Objective Force, in effect Objective Force systems fielded to the Legacy Force.
- But there were some systems that were crucial to our ability to maintain combat overmatch that we needed to continue. Systems such as the Crusader and HET are crucial to the Legacy Forces' combat capability.
- To sustain a force that provides the necessary combat overmatch at an affordable price, the Army must rebuild and selectively upgrade Legacy Force systems. This recapitalization and modernization effort will return selected systems to like-new condition and extend Army capabilities into the future.

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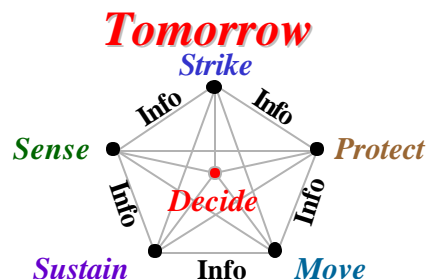
# The Army Transformation

## Objective Force

- Force that is strategically responsive and dominant at every point on the spectrum of operations.
- Provides NCA with an increased range of options for regional engagement, crisis response, and sustained land force operations.
- Capable of rapid transition across mission requirements without loss of momentum.
- 96% of all investment in S&T is to meet Objective Force Requirements.
- Transforming the Army to the Objective Force is a 30 year process



*In today's major weapons systems, the six key combat functions are built into the same platform*



*In the system of systems, the six key combat functions will be distributed across the battlefield in multiple platforms*

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## Talking Points to the Objective Force

- The Objective Force will meet the goal of being a force that is that is strategically responsive and dominant at every point on the spectrum of operations. The force will also have seven desired characteristics: responsive, deployable, agile, versatile, lethal, survivable, sustainable.
- The Objective Force is what we are working to achieve. The Objective Force will exhibit each of the seven characteristics across the full spectrum of military operations. This is the benchmark and the standard by which each of the other forces are measured.
- The Objective Force is not platform driven, but rather the focus is on achieving capabilities. The Objective Force will operate as a suite of integrated systems. The chart above depicts a Notional Systems Construct. Again the emphasis is on the capabilities, not on the platform.
- The key to the Objective Force Transformation is technology. The Army is investing now in S&T to meet the Objective Force requirements. The POM has \$8.5B programmed for S&T (\$3B focused on the FCS) and an additional \$3B to support EMD for the Future Combat System. 96 % of the POM S&T funding supports the Objective Force.
- Transformation to the Objective Force is a 30 year process.
- The S&T effort supports the “System of Systems Approach” to the creation of the Objective Force. The best analogy of that approach is a Carrier Battle Group. A Carrier Battle Group provides the Navy with a full range of functionality. While a sub or a destroyer each contributes specific capabilities, it is only when brought together do they achieve their warfighting potential. The Carrier Battle Group is equipped, administered, and deployed as an integrated whole.

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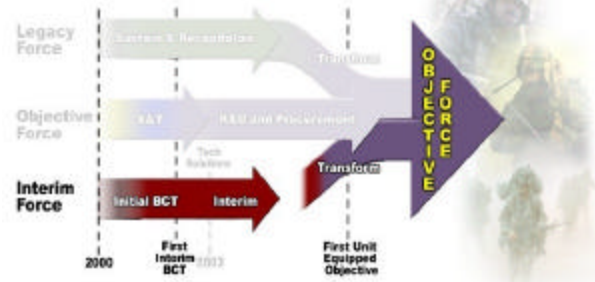


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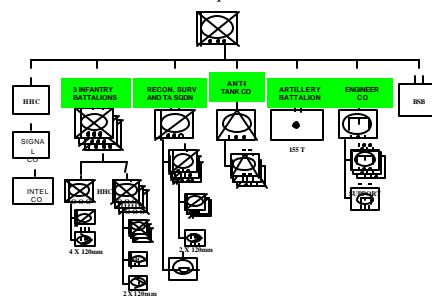
# The Army Transformation

## Interim Force

- Meets immediate requirement to provide CINCs increased warfighting capability.
- 6 of 8 required Interim Brigade Combat Teams (IBCT) currently funded.
- The IBCT is a rapidly deployable combined arms team.
- Off-the-shelf equipment readily available to meet requirements.
- Not an experimental force. Trained and ready to deploy.



... Responsive, Deployable, Agile, Versatile,  
Lethal, Survivable, Sustainable.



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## Talking Points to the Interim Force

- Since the technology for the Objective Force is not available today, the Interim Force is the vector of Army Transformation designed to meet the immediate warfighting requirements of the National Command Authority and the CINCs.
- As described earlier, there has been a ten-year capabilities gap. Heavy forces lack the deployability to be as strategically responsive as necessary. Light forces lack the tactical mobility, lethality, and survivability to be a viable option for the NCA in many situations. The Interim Brigade Combat Team (IBCT) will address this problem.
- The Interim Force is not as relevant across the full spectrum of operations because we do not yet have the revolutionary technologies at hand for Objective Force Lethality and Survivability. The Objective Force will achieve a dramatic reduction in logistics footprint that will not yet be available for the Interim Forces.
- At the heart of the IBCT will be the Interim Armored Vehicle (IAV). This yet to be selected vehicle has the following Key Performance Parameters (KPPs):
  - C-130 transportable
  - Integrate existing and planned C4ISR
  - MGS variant -- hardened bunkers, machine gun & sniper positions
  - Infantry and Engineer variant - 9soldiers and equipment
- These KPPs were validated by the JROC with the ORD of Feb 00.
- The IAV will be off-the-shelf equipment that is readily available to meet the requirements. The selection announcement will be made in the near future.
- It is important to note that the Interim Force is not an experimental force, but rather it will be trained and ready to deploy. Its IOC date is Dec 01.
- The Interim Force will be able to operate across the full spectrum of operations to ensure combat overmatch for our forces until Objective Force capabilities are fielded.

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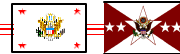


## ***Bottom Line***

- **The Army is Transforming** into a more strategically responsive full-spectrum force.
- **The 3 axes Transformation strategy** is critical to shaping and responding today, while preparing for the future.
- **Transforming The Army to the Objective Force** is a 30-year process.
  - **Legacy Force** – guarantees near-term warfighting readiness to support the NMS.
  - **Objective Force** – responsive, deployable, agile, versatile, lethal, survivable, and sustainable.
  - **Interim Force** – meets immediate requirement to provide CINCs increased warfighting capability.
  - **Hard choices and trade-offs** have already been made.
- **Historic beginning to Army Transformation.**

**Army Transformation provides the Nation with a force that is strategically responsive and dominant at every point on the spectrum of operations.**

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## **Talking Points to The Bottom Line**

- In this briefing, we looked at the reasons for Army Transformation. These reasons included the environment, the threat, and strategic and operational imperatives.
- This briefing also explained The Army's future concept of warfare and how Army Transformation will produce capabilities to deliver victory in the information age.
- The Bottom line is that The Army is Transforming into a full spectrum force that is strategically responsive and dominant at every point on the spectrum of operations.
- The 3 vector Transformation strategy is critical to shaping and responding today while preparing for the future.
- The Legacy Force is what guarantees near-term warfighting readiness to support the National Military Strategy.
- The Objective Force is where The Army is heading. With advances in Science and Technology, the Objective force will be responsive, deployable, agile, versatile, lethal, survivable, and sustainable.
- The Interim Force will fill an immediate requirement to provide CINCs with increased warfighting capabilities.
- Hard choices and trade-offs have already been made. Army Transformation Plan is comprehensive and integrated. This is a historic beginning to Army Transformation.

***The Army is Transforming – We owe it to our Soldiers!***

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**“This is a historic opportunity. Most armies change when wartime defeat forces them to do so. Today, we seek to change in a time of peace, prosperity, perspective, and potential. But we have a narrow window, and these conditions will not last for very long. While they do, The Army is embarking on its most significant effort to transform since World War I... The Army has moved out. We will repay America’s investment in us with quality people, warfighting readiness, and in time, with a land force transformed to meet threats all across the spectrum of operations... We cannot afford to miss this opportunity.”**

**GEN Eric K. Shinseki, 10 Feb 2000**

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## **Talking Points to CSA Quote**

**None**

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